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Coordination, gapping, and the Portuguese inflected infinitive: the role of structural ambiguity in syntactic change

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14.1 Introduction

From the perspective of generative grammar, language acquisition is the locus of grammatical change.[1] Assuming that Universal Grammar supports and constrains language acquisition in a constant manner, it is broadly accepted that grammatical change between the generations will happen only when the primary linguistic data (PLD) feeding the construction of individual grammars are in one way or another altered prior to the change (due to contingent environmental factors). Shifts in the PLD that matter for language acquisition are thought to sprout from different situations: language contact may give rise to borrowing, internalized diglossia or to imperfect learning of a foreign language thereby transmitted to a subsequent generation of speakers (see Kroch 1989, 2001; Kroch and Jaylor 1997; Lightfoot 1988, 1991); adults may introduce consistent variation in their use of language (within the range of possibilities allowed by their internalized grammars) for stylistic, fashion-driven, pragmatic, prestige-induced, group identification or other social reasons (see Lightfoot 1988, 1991, 1999, 2006; Hale 1998). The present chapter offers a case study which suggests that grammatical change may arise in the context of acquisition without alteration of the PLD, as far as structural ambiguity plays a role.[2] We will

[1] I am grateful to two anonymous reviewers for their helpful comments.

[2] This seems to be at odds with the perspective that syntactically ambiguous data (allowing more than one parse) do not count for language acquisition because the language acquisition device is built in such a way as to exclusively rely on unambiguous triggers (Fodor 1998; Dresher 1999; Lightfoot 1999). The type of structural ambiguity to be discussed in this paper is not syntax-internal but a product of the interplay between syntax, discourse, and the lexicon. I suggest that this particular type of trans-modular structural

be dealing with a change whereby coordination creates the structurally ambiguous setting leading to the appearance of a new grammatical structure. The innovation comes into view some centuries after it could have been triggered (assuming that the proposed identification of the trigger is correct). As diffusion is unrelated to grammatical change and is to a large extent a matter of chance, the lack of chronological coincidence between a PLD scenario allowing a certain change and the display of the actual change is not surprising.[3] Moreover, change induced by steady structural ambiguity is not driven by necessity differently from change arising from an altered PLD (happening to shift in such a way that a particular new grammar is the only possible outcome). In order to lay the present thoughts on a less speculative ground, the case of syntactic change to be studied in this chapter will now be introduced.

In Modern Portuguese, both simple infinitives and inflected infinitives can be embedded under causative and perception verbs, as examples (14.1) and (14.2) below show.

(14.1) Mandaram/vimos os cavaleiros partir. (MP: OK; OP: OK)
sent-3PL/saw-1PL the riders start-INFIN
'They sent/we saw the (horse) riders (to) start.'

(14.2) Mandaram/vimos os cavaleiros partirem. (MP: OK; OP: *)
sent-3PL/saw-1PL the riders start-INFLECTED-INFIN-3PL
'They sent/we saw the riders (to) start.'

In Old Portuguese, however, sentences such as (14.2), which manifest subject–verb agreement in the complement clause, are not attested. The central issue that I wish to discuss in this chapter is the appearance of the Portuguese inflected infinitive in the clausal complements of Exceptional Case Marking (ECM) verbs. While the inflected infinitive itself is attested from the earlier Portuguese texts (which date from the twelfth century), it is only in the fifteenth century that a few examples of inflected infinitival complements of ECM verbs are found. The new structure becomes common from the sixteenth century on. Having as a background the cue-based theory of acquisition and change proposed by Lightfoot (1999), I will look for a local trigger for the acquisition of the new structure. Within the perspective that I will be assuming, there is no place for

ambiguity may go undetected by learners and thus have an impact on language acquisition and language change.

[3] I am following here Hale's (1998) assumptions with respect to the possible invisibility of change and to the distinctness of *change* and *diffusion*: 'Change in this sense defined above is limited to a single acquisition event. It does not involve "speech communities", "(E-)languages" or other such ill-defined entities. Under this notion of "change", the vast majority of changes will remain unobserved, passing away with the originator rather than showing up in the historical records. Under this analysis, a change diffuses from the innovator to a (subset of) those with whom the innovator comes in contact. Diffusion, notice, is completely unlike change: change is a set of differences between a source grammar and the grammar of an acquirer. Diffusion, on the other, gives rise to an identity between the innovator language and the language of the acquirer. Diffusion thus represents the trivial case of acquisition: accurate transmission'. (Hale 1998: 5)

overgeneralizations on the basis of analogies with other contexts found in the input.[4] Thus the fact that the inflected infinitive was at all times a grammatical option in Portuguese does not by itself explain why it came to be allowed in a new context. The account I will suggest for the change draws on the idea that particular situations of structural ambiguity prompted by the availability of elided structures in coordination contexts may constitute a trigger for change.

The chapter is organized in six sections. In Section 14.2, I will draw some diachronic parallels between ECM verbs and control/raising verbs. The fact that control and raising verbs pattern with ECM verbs in some respects has relevance for the topic under discussion in a sense to be clarified in Section 14.5. In Section 14.3, I will show that causative and perception verbs entered both the *faire*-infinitive construction and the ECM construction in Old Portuguese. This is a relevant matter because it was the existence of the ECM structure that made room for the emergence of the inflected infinitive in the clausal complements of ECM verbs (although it is not to be seen as a causal factor). Next, in Section 14.4, I will identify a type of independent inflected infinitival clauses, in Old Portuguese, which played a central role in the change. As I see the change, these independent inflected infinitival clauses, with imperative meaning, came to be interpreted as subordinate clauses dependent on a gapped verb (identified by a causative verb). Finally, in Section 14.5, I will be able to spell out my proposal to explain how the inflected infinitive came to be allowed in the clausal complements of ECM verbs. Moreover, I will discuss how the change also affected raising and control verbs. Section 14.6 concludes the paper.

14.2 Some diachronic parallels between causative/perception and control/raising verbs

There are some divergent traits of Old Portuguese and Modern Portuguese with respect to the infinitival complements of ECM predicates that appear to correlate with the ban on inflected infinitives in Old Portuguese. I refer to the absence of negative operators in the relevant kind of infinitival clauses in Old Portuguese, and to the fact that in Old Portuguese, with few exceptions, embedded object clitics moved out of the infinitival complement clause and cliticized to the main verb. In Modern Portuguese, in turn, the relevant infinitival clauses can be independently negated, and clitic climbing is optional.

[4] As noted by one of the reviewers, Kiparsky (this volume) takes the opposite direction. I will not discuss here, on conceptual grounds, the diverging views on syntactic change of Kiparsky and Lightfoot. With respect to the particular case of syntactic change discussed in this paper, analogical extension would not account for the correlation between the emergence of the inflected infinite, negation, and enclitics within the infinitival complements of ECM verbs, which all came into play around the sixteenth century (cf. Martins 2006).

In addition, it should be noted that the facts under consideration are to a certain extent manifested by the infinitival complements of some Control and Raising verbs as well. While the inflected infinitive is never an option in this case,[5] embedded negation and cliticization within the infinitival clause become common options in Control and Raising structures only from the sixteenth century onward.

The changes attested in the history of Portuguese have been taken by different authors to show that the Old Portuguese infinitival complements of ECM, Control, and Raising verbs would have a reduced structure (which would not include functional slots for agreement, negation, or 'syntactic' cliticization). I have argued myself in favor of this type of analysis (see Martins 2000). But in this chapter I will just be concerned with motivating the change. Actually, what I will have to say does not depend in any respect on adopting the hypothesis that some Old Portuguese infinitival clauses would have a reduced functional structure.

In tandem with the emergence of the inflected infinitive, I will pay attention here to the emergence of predicative negation in the infinitival complements of ECM, control, and raising verbs, but I will leave the cliticization issue out of the scope of the chapter. This is because the decrease in clitic climbing involves additional ingredients beyond the trigger for change I will identify, which I will not go into here.

Let me thus exemplify the contrast between Modern Portuguese and Old Portuguese with respect to embedded negation. While sentences (14.3a) and (14.4a) below represent a grammatical option in Modern Portuguese as well as in Old Portuguese, sentences like (14.3b) and (14.4b), displaying a negative clause embedded, respectively, under an ECM and a control/raising verb, are not found in the Old Portuguese texts.[6]

[5] I will show further on in the paper that some qualification of this assertion is needed (see Section 14.5 below).

[6] One of the reviewers comments that complements of causative verbs like *mandar* 'send, make, order, determine' are 'by their nature, active and affirmative' and suggests that although the syntax of MP allows sentences like (14.4a) above, such sentences are not expected to occur 'in samples of actual language data, as corpora invariably are', which actually would make OP and MP non-distinct in the relevant respect. The reviewer concludes that: 'It would help the persuasiveness of the paper if MP corpora were found to contain actual examples' of negative infinitival clauses embedded under causative verbs. The examples offered below come from the Contemporary Portuguese journalistic corpus *CETEM-Público* (cf. www.linguateca.pt/cetempublico):

(i) Uma excepção à regra que *manda* *não* pôr os ovos
an exception to-the rule that determines not put-INFIN the eggs
todos no mesmo cesto
all in-the same basket
'An exception to the rule that recommends not putting all one's eggs in one basket…'

(ii) Moisés (…) tapa com as mãos o que *manda* *não* matar
Moses … covers with the hands the-one that orders not kill-INFIN
'Moses … covers with his hands the one [of the Ten Commandments] that orders not to kill.'

(14.3) a. Não mandaram os cavaleiros partir. (MP: OK; OP: OK)
not sent-3PL the riders start-INFIN
'They didn't send the (horse) riders to start.'

b. Mandaram os cavaleiros não partir. (MP: OK; OP: *)
sent-3PL the riders not start-INFIN
'They sent the (horse) riders to not start.'

(14.4) a. Agora os cavaleiros não podem partir. (MP: OK; OP: OK)
now the riders not can start-INFIN
'Now the (horse) riders can't start.'

b. Agora os cavaleiros podem não partir. (MP: OK; OP: *)
now the riders can not start-INFIN
'Now the (horse) riders can/may not start.'

In Section 14.5 below it will be shown that the change leading to the emergence of the inflected infinitive in the clausal complements of causative and perception verbs and the change which makes negation available within the infinitival complements of causative/perception and control/raising verbs are triggered in a similar way.

14.3 The *faire*-infinitive and the ECM constructions in the history of Portuguese

As shown in Section 14.1 (see examples (14.1)–(14.2) above), causative and perception verbs in Modern Portuguese allow the ECM structure and the embedded inflected infinitival structure. Besides, causative and perception verbs are found in the *faire*-infinitive construction (studied by Kayne (1975) and Burzio (1986), among others).[7] This is a 'clause union' structure where the finite and the infinitival verb restructure into a verbal unit with its own Thematic and Case properties. In the *faire*-infinitive construction the infinitival subject of the bi-clausal structures manifests object properties being Case marked as accusative or dative depending on the transitive or intransitive nature of the infinitival verb. Sentence (14.5) exemplifies the *faire*-infinitive construction with the causative *mandar* 'send, order' plus an intransitive verb. Sentences (14.6) and (14.7) exemplify the *faire*-infinitive construction with the causative *mandar* plus a transitive verb. The sentences with a transitive infinitive (i.e. (14.6) and (14.7)) display 'Subject Dativization', in the terms of Kayne (1975). This is shown in (14.6) by the presence of the preposition *a* 'to', which precedes the DP *os doentes* 'the patients', and in (14.7) by the presence of the dative clitic. Given its object nature, the accusative or dative full DP in the *faire*-infinitive construction always surfaces after the verbal complex, as can be seen in sentences (14.5) and (14.6).

[7] As for Portuguese, work on this topic was carried out by Gonçalves (1999) and Gonçalves and Duarte (2001).

(14.5) A enfermeira mandou sair as visitas.
the nurse sent leave-INFIN the visitors
'The nurse made the visitors leave (the infirmary).'

(14.6) A enfermeira mandou fazer a cama aos doentes.
the nurse sent make-INFIN the bed to-the patients
'The nurse sent the patients to make the bed.'

(14.7) A enfermeira mandou-lhes fazer a cama.
the nurse sent-them-DAT make-INFIN the bed
'The nurse sent them to make the bed.'

In contrast to the *faire*-infinitive construction, in the ECM construction the embedded subject generally precedes the infinitival verb (see sentence (14.8), to be contrasted with sentences (14.5)–(14.6) above). Moreover, when the subject is expressed by a clitic it always manifests Accusative case (see sentence (14.9) below, to be contrasted with sentence (14.7) above).[8]

(14.8) A enfermeira mandou os doentes fazer a cama.
the nurse sent the patients make-INFIN the bed
'The nurse sent the patients to make the bed'

(14.9) A enfermeira mandou-os fazer a cama.
the nurse sent-them-ACC make-INFIN the bed
'The nurse sent them to make the bed'

Both the *faire*-infinitive construction and the ECM construction are found in Old Portuguese. The *faire*-infinitive construction is attested by the Old Portuguese sentences in (14.10) and (14.11) below. The fact that 'Subject Dativization' is manifested both in (14.10), with a dative clitic, and in (14.11), with a strong pronoun following the preposition *a* 'to', makes clear that these sentences illustrate the *faire*-infinitive

[8] Another clear difference between the ECM and the *faire*-infinitive structures surfaces when the infinitival verb is reflexive. The reflexive pronoun *se* is realized in the ECM construction, but *se* must be suppressed in the *faire*-infinitive construction (see (i) to (iii) below).

ECM: (i) A enfermeira mandou os doentes levantar-se.
the nurse sent the patients get-up-themselves
'The nurse sent the patients to get up'

faire-infinitive: (ii) *A enfermeira mandou levantar-se os/aos doentes.
the nurse sent get-up-themselves the/to-the patients
'The nurse sent the patients to get up'

(iii) A enfermeira mandou levantar os doentes.
the nurse sent get-up the patients
'The nurse sent the patients to get up'

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construction. Moreover the non-clitic dativized subject in (14.11) is placed after the verbal complex, as expected.

(14.10) quando *lhe* esto ouvyo dizer
when her-DAT this heard say-INFIN
'when he heard her say so'
(*Crónica Geral de Espanha de 1344*. Cintra 1961: 344)

(14.11) fazendo-o primeiro ssaber *a elas*
making-it-ACC first know-INFIN to they-FEM
'letting them be the first to know it'
(Legal document, 1447. Martins 2001b: 499)

On the other hand, sentences (14.12) and (14.13) can only represent the ECM construction. This is shown by the non-dative Case marking of the infinitival subject in both sentences (with a transitive infinitival verb). The accusative nature of the infinitival subject is apparent in sentence (14.12), which displays a clitic pronoun subject. Moreover, in sentence (14.13) the subject appears in the inter-verbal position which is typical of the ECM structure.

(14.12) feze-*os* jurar(…) que nũca se partissem
made-3SG-them-ACC swear that never themselves would-leave
dally
from-there
'He made them swear that they wouldn't leave'
(*Crónica Geral de Espanha de 1344*. Cintra 1961: 258)

(14.13) viu *Galvam* tal doo fazer
saw-3SG Galvam such lament do-INFIN
'He saw Galvam lamenting his faith'
(*Demanda do Santo Graal*. Quoted by Davies 1994: 51)

The inflected infinitival complements of causative and perception verbs which we will be concerned with in this paper emerged from the ECM structures. Hence in the remaining sections of the paper we will disregard the *faire*-infinitive structures.

14.4 Independent inflected infinitival clauses in Old Portuguese

In Modern European Portuguese, the inflected infinitive occurs typically in embedded clauses, being excluded from independent or matrix clauses (see Raposo 1987). In Old Portuguese, however, the inflected infinitive is commonly found in unembedded domains. The relevant clauses have, in general, an imperative import and are either independent clauses or the matrix part of a conditional or a temporal construction.

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These infinitival clauses expressing a stipulation or a strong wish are well attested from the late twelfth century up to the sixteenth century. Sentences (14.14) to (14.18) below are given by way of illustration of the Old Portuguese independent inflected infinitive. Examples (14.16) and (14.17) make patent how in Old Portuguese such mandatory infinitival clauses alternate with subjunctive clauses in similar sentential and textual contexts.

(14.14) e meas debitas de pane
and my debts of cereal
tornaren-se en milio
return-INFLECTED-INFIN-3PL-*SE*-PASSIVE in corn
'and my debts with respect to cereals shall be paid in corn'
(Legal document, 12th century. Martins 2001b: 92)

(14.15) E *ffazer*-sse o vinho no
and make-INFLECTED-INFIN-3SG-*SE*-PASSIVE the wine in-the
nosso lagar(…) E *pagardes* a
our wine-press and pay-INFLECTED-INFIN-2PL the
lagaragem
wine-press-use
'And the wine is to be made in our wine press and you shall pay for using it'
(Legal document, 1381. Martins 2001b: 458)

(14.16) E pagando-o eu das dictas quoreenta libras
and paying-him I of-the mentioned forty pounds
dar-me esta obrigaçõ e a sentença
give-INFLECTED-INFIN-3SG-me this obligation and the verdict
e nõ mha dãdo que me *page*
and not me-it giving that me pay-PRESENT-SUBJUNCTIVE-3SG
por ella quoreenta libras
for it forty pounds
'If (and when) I pay him the forty pounds that I am legally obliged to pay, he will free me from the obligation. If he does not do so, he will have to pay me forty pounds'
(Legal document, 1366. Martins 2001b: 220)

(14.17) a. este prazo *valer* e se
this contract be-valid-INFLECTED-INFIN-3SG and *SE*-PASSIVE
comprir em todo
accomplish-INFLECTED-INFIN-3SG in everything
'this contract is to be fully respected'
(Legal document, 1534. Martins 2001b: 306)

b. este prazo *valha* e
this contract be-valid-PRESENT-SUBJUNCTIVE-3SG and
se *conpra*
SE-PASSIVE accomplish-PRESENT-SUBJUNCTIVE-3SG
'this contract is to be respected'
(Legal document, year 1496. Martins 2001b: 291)

In Modern Portuguese the alternation between subjunctive and inflected infinitive is lost. Sentences such as (14.14) and (14.15), with the inflected infinitive, would be ungrammatical in Modern Portuguese, only equivalent mandatory sentences with subjunctive verbal inflection being a grammatical option.

An analysis of the Old Portuguese independent inflected infinitive is provided in Martins (2001a). Without going into detail here, my suggestion is that the inflected infinitive (originated in the imperfect subjunctive of Latin) would in Old Portuguese be just like finite Tense with respect to the ability to license Nominative Case. However the inflected infinitive would convey an anaphoric Tense, being in this respect similar to the subjunctive. Therefore, it would need to be anchored in a non-dependent Tense (that is, the Tense of the embedding clause) or licensed by certain operators, such as a directive operator.[9]

For our purposes here the important fact is that the Old Portuguese independent mandatory inflected infinitive left the stage just after the inflected infinitive with ECM verbs came into play.

14.5 The emergence of the inflected infinitive as complement of causative and perception verbs, and other related issues

At this point, we have the necessary information on Old Portuguese syntax to allow fruitful observation of the data relevant to clarifying how the inflected infinitive

[9] A possible analysis for the mandatory inflected infinitives of Old Portuguese, in the vein of Kayne (1992) and Zanuttini (1997), naturally comes to mind. We could posit the existence of a phonetically unrealized modal or causative verb which would select an infinitive as its complement (on a descriptive level a proposal of this sort is put forth by Maia (1986)). The empty modal, or causative, would in turn be licensed by a directive operator in Comp encoding the 'imperative' illocutionary force. There are several problems with this hypothesis however. The first problem is that cross-linguistic evidence points against identifying the directive operator as an appropriate licenser for the hypothesized empty modal or causative verb. In all the Romance varieties observed by Kayne (1992) and Zanuttini (1997), an infinitival suppletive imperative is only possible in negative clauses. This fact leads both Kayne and Zanuttini to the conclusion that it is the negative marker which licenses the empty modal or causative. The second and crucial problem is that modals and causatives do not take inflected infinitival clauses as complements in Old Portuguese (this being the central issue of the present chapter). Moreover, uninflected infinitival clauses are never found as mandatory independent clauses in Old Portuguese, although modal and causative verbs select precisely uninflected infinitival clauses as complements. Note, in addition, that uninflected infinitives are the only kind of infinitives that show up in the suppletive negative imperatives studied by Kayne (1992) and Zanuttini (1997).

came to be allowed in the clausal complements of causative and perception verbs. I will propose that a particular kind of structural ambiguity induced by gapping in coordination contexts is behind the change.

The thirteenth-century excerpt transcribed in (14.18) below includes an independent mandatory inflected infinitival clause (in italics in the example) followed by a mandatory subjunctive clause, thus further illustrating the kind of variation discussed in Section 14.4 above.[10]

(14.18) e sobre todo esto mandamus e houtorgamus
and upon all this order-PRESENT-1PL and confirm-PRESENT-1PL
que se alguu de nos ueher que aquesta nossa
that if some of us come-FUTURE-SUBJ-3SG that this our
partizõ queyra britar ou desfazer,
sharing want-PRESENT-SUBJ-3SG break-INFIN or undo-INFIN
peyte áá outra parte aguardante. C. mrs.
pay-PRESENT-SUBJ-3SG to-the other part dependable C *maravedis*
uelhus da moheda corredia en Portugal *e o prazo*
old of-the coin running in Portugal and the contract
ficar en sa forteleza e
stay-INFLECTED-INFIN-3SG in its strong-ness and
uala pera todo senpre
be-valid-PRESENT-SUBJ-3SG for all ever

'And besides, we order and confirm the order that the one of us who should try to break or annul this contract will have to pay to the other part one hundred *maravedis* of the old coin current in Portugal. And the contract is to be kept. And it should be valid forever'

(Legal document, 1287. Maia 1986: 763)

[10] A reviewer points out that children are not likely to encounter sentences like (14.18) above and takes this fact to call into question that language acquisition might have been a motivator for the change under discussion. I assume that the OP grammar allowing (14.18) above would also allow sentences like (i) and (ii) below.

(i) Mandei-te estar calado. E não me responderes!
sent-1SG-you-ACC be-INFIN quite. and not me answer-INFLECTED-INFIN-2SG
/E não me respondas!
/and not me answer-PRESENT-SUBJ-2SG
'I've told you to be quite. And don't you dare to further reply to me!'

(ii) Já te mandei deitar. E dormires!
already you-ACC sent-1SG go-to-bed-INFIN. and sleep-INFLECTED-INFIN-2SG
/E dorme!
/and sleep-IMPERATIVE-2SG
'I've already sent you to bed. And sleep!'

In addition, example (14.18) also involves coordination and displays the kind of ambiguous configuration that may have fed the reanalysis of certain independent inflected infinitival clauses as embedded clauses.

For clarification purposes, let us consider the reconstructed shorter sentence in (14.19). There are two possible interpretations for (14.19a): either (as shown in (14.19b)) the sequence *o prazo ficar em sa forteleza* is analyzed as an independent sentence introduced by a coordinate conjunction, in which case there would be coordination at the textual/inter-sentential level; or instead (as shown in (14.19c)) the sequence *o prazo ficar em sa forteleza* is analyzed as the second member of a (bi-clausal) coordinate structure that licenses gapping—in (14.19c), the gapped site is marked and the verbal gap antecedent (that is, the finite causative verb) is in boldface. So, the clause introduced by the coordinate conjunction might be read either as an independent mandatory inflected infinitival clause or as the complement clause of a phonetically unrealized causative verb.[11]

(14.19) a. mandamos peytar àà parte aguardante C
order-PRESENT-1PL pay-INFIN to-the part dependable C
maravedis e *o prazo ficar en sa forteleza*
maravedis and the contract stay in its strong-ness

b. Mandamos peytar àà parte aguardante C
order-PRESENT-1PL pay-INFIN to-the part dependable C
maravedis. E *o prazo ficar en sa*
maravedis and the contract stay-INFLECTED-INFIN-3SG in its
forteleza
strong-ness

'We order that the one of us who should try to break this contract will have to pay to the other part one hundred *maravedis*. And the contract is to be kept'

c. **Mandamos** peytar àà parte aguardante C maravedis e
order-1PL pay-INFIN to-the part dependable C *maravedis* and
[–] *o prazo ficar en sa forteleza*
the contract stay-INFIN in its strong-ness

'We order that the one of us who should try to break this contract pay to the other part one hundred *maravedis* and (we order that) the contract be kept'

As the inflected infinitive may bear overt agreement marking, the interpretation of an independent inflected infinitive as an infinitive embedded under a gapped causative verb would necessarily imply taking as a grammatical option a structure with an ECM

[11] In the former case the sentence initial coordinate conjunction is a left-peripheral element which signals the continuation of a discourse topic (in the sense of Poletto 2005).

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verb selecting an inflected infinitival complement. (See sentence (14.20), where the morpheme in italics expresses the third person plural).

(14.20) mandamos peytar àà parte aguardante C
order-PRESENT-1PL pay-INFIN to-the part dependable C
maravedis e os prazos ficar*em* en sa
maravedis and the contracts stay-INFLECTED-INFIN-3PL in its
forteleza
strong-ness

The structural ambiguity between an independent inflected infinitival clause and an embedded infinitival clause in coordinate structures is also relevant to understanding the change with respect to predicative negation manifested in ECM as well as in control and raising structures. Example (14.21) below shows that the kind of ambiguous configuration which made room for an inflected infinitive embedded under a causative verb also cleared the way for predicative negation.

(14.21) E que fosse nossa mercee mandarmos que husem de
and that should-be our kind-will order-1PL that use-3PL of
seus officios e *per suas mortes nom*
their business-licenses and by their deaths not
seerem *dados a outros*
be-INFLECTED-INFIN-3PL given to others
'[It was suggested to us] that we should be so kind as to order that they keep the business licenses they were once given; and when they die such licenses should not be transmitted to others [= to new brokers]'
(Royal chancellery; 1436. Dias 1998: 382)

Example (14.22) below illustrates how the interpretation of a negative independent inflected infinitival clause as an infinitival clause embedded under a gapped modal verb would have triggered the appearance of predicative negation within the clausal complements of control and raising verbs. In (14.22a) the relevant Old Portuguese coordinate structure is given a word by word gloss and translated under the interpretation that the negative infinitival clause (in italics) is an independent mandatory clause with an inflected infinitive. In (14.22b) it is shown how the same coordinate structure allows an interpretation of the negative infinitival clause as the complement of a phonetically unrealized modal verb. Under the latter interpretation the coordinate structure would license gapping. The verbal gap and its antecedent are signalled in (14.22b).

(14.22) a. & quando sayr desse logar deue-sse
and when exit-FUTURE-SUBJ-3SG of-that place must-*SE*
logo a carpir & braadar pela rua &
immediately to cry-INFIN and shout-INFIN by-the street and

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ir logo a justiça dereita.mente & *nõ*
go-INFIN immediately to justice straight and not
entrar *ẽ* *outra* *casa* &
enter-INFLECTED-INFIN-3SG in other house and
dizer ueedes que me fez
say-INFLECTED-INFIN-3SG see-2PL what me-DAT did
foaao per nome
such-person by name

'When you will come out of that place you ought to go down the street crying and screaming, and you ought to go straight to court to press charges. You shall not enter other people houses and complain, saying: 'see what he did to me? '(naming the person)'

(13th century regulations. Quoted by Silva 2003: 150)

b. & quando sayr desse logar **deue**-sse
and when exit-FUTURE-SUBJ-3SG of-that place must-*SE*
logo a carpir & braadar pela rua &
immediately to cry-INFIN and shout-INFIN by-the street and
ir logo a justiça dereita.mente & [–] *nõ*
go-INFIN immediately to justice straight and not
entrar *ẽ* *outra* *casa* & dizer ueedes que
enter-INFIN in other house and say-INFIN see-2PL what
me fez foaao per nome
me-DAT did such-person by name

'When you will come out of that place you ought to go down the street crying and screaming, and you ought to go straight to court to press charges, and (you ought) not to enter other people houses and complain, saying: "see what he did to me?"(naming the person)'

The innovative structures resulting from the change under consideration are well attested in the writings of the sixteenth-century author Afonso de Albuquerque. In the letters sent from India to the king of Portugal by Afonso de Albuquerque the new inflected infinitival complement clauses are found in tandem with the old independent inflected infinitival clauses expressing a stipulation or desideratum. Sentences (14.23) and (14.24) are examples of the latter.

(14.23) e aly nos ajumtarmos todos
and there us-RECYPROCAL assemble-INFLECTED-INFIN-1PL all
e tornarmos sobre goa e
and return-INFLECTED-INFIN-1PL over Goa and
fazermos o que podermos
do-INFLECTED-INFIN-1PL the what can-FUTURE-SUBJ-1PL

'And we shall converge on there, all of us, and we shall force our way back into Goa and we shall do everything we can'

(Letters by Afonso de Albuquerque. Pato 1884: 23)

(14.24) e ver se com este feito de gooa lhe
and see-INFIN if with this deed of Goa them-DAT
podemos tirar o credito que tem nos turqos
can-PRESENT-1PL take-*INFIN* the credit that have in-the Turkish
e medo que lhe am, *e*
and fear that them-DAT have-3PL and
averem *que* *somos* *homens* *que*
believe-INFLECTED-INFIN-3PL that are-PRESENT-1PL men that
faremos *tam* *boons* *feitos* *na* *terra* *como* *no* *maar*
will-do-1PL such good deeds in-the land as in-the sea

'After what we accomplished in Goa, let us see if we can make them no longer value and fear the Turks. And hopefully they will understand what kind of men we are, men capable of good deeds not only in land but also at sea.'

(Letters by Afonso de Albuquerque. Pato 1884: 28)

Examples such as (14.23) and (14.24) are an important piece of evidence to show that the mandatory independent inflected infinitival clauses lasted long enough to allow the proposed reanalysis.[12] Moreover, in accordance with the rationale of change proposed in this chapter, inflected infinitival clauses as complements of ECM verbs are often found in Afonso de Albuquerque's letters precisely in coordinate structures involving gapping. This fact appears to support the view that such configurations are crucial to understanding the change. Example (14.25) below attests the occurrence of predicative negation and the inflected infinitive in an ECM structure with the perception verb *ver* 'see'. It also displays two embedded inflected infinitival clauses in gapping contexts.

(14.25) **Vejo**, senhor, tambem *nam* *me*
see-PRESENT-1SG lord also not me-ACC
mamdardes armas nem jemte nem nenhum
send-INFLECTED-INFIN-2PL weapons nor people nor none
aparelho de guerra; **vejo** vossos capitães que de
apparatus of war see-PRESENT-1SG your captains that from
laa vem, muy isemtos, e omde me
there come-PRESENT-3PL very uncommitted and where me-ACC

[12] In Martins (2001a) I see the loss of the Old Portuguese independent inflected infinitival clauses as a result of the movement of the inflected infinitive, born from the Latin imperfect subjunctive, in the direction of the simple infinitive. This would be motivated by the presumably marked character of an infinitive having a self-contained [assign nominative Case] feature. This approach can be integrated within the view developed in the current chapter.

nam acham em pessoa[–] *darem* muy
not find-3PL in person give-INFLECTED-INFIN-3PL very
pouco por minhas determinaçõees e mandados e [–]
little for my resolutions and orders and
pórem nas em conselho e em vozes
put-INFLECTED-INFIN-3PL them-ACC in council and in voices

'I regret to see, my lord, that you also do not send me weapons, or soldiers, or any war equipment. I regret to see that when your captains arrive, they behave very wildly, and in my absence they do not execute my resolutions and orders, but they gather in councils and debate those resolutions'

(Afonso de Albuquerque. Cf. Pato 1884: 35)

We may ask at this point why the inflected infinitive did not become a grammatical option in the clausal complements of control and raising verbs. In fact, the kind of structural ambiguity just described is also found with such verbs, as example (14.26) below shows.

(14.26) outorgarõ que o dito martjm ãnes e sua molher
confirmed-3PL that the said Martim Anes and his wife
e pesoa os **posam** auer
and(said) person them-ACC can-PRESENT-SUBJ-3PL have-INFIN
pera sj E os demãdar E *se*
for themselves and them-ACC demand-INFIN and themselves
lograrem *delles* *em* *suas* *vidas*
benefit-INFLECTED-INFIN-3PL of-them in their lives

'they confirmed that the said Martim Anes and his wife, as well as a third person they name, can have and demand the right to the property. And they shall take profit from it as long as they live'

(Legal document, 1417. Martins 2001b: 481)

The relevant distinction between ECM structures, on the one hand, and control and raising structures on the other is that the former allow an autonomous embedded subject but the latter do not. This is made particularly clear within a Hornstein-Style (1999, 2001) analysis of control as raising. The inflected infinitive would not have come into play in the clausal complements of modals or volition verbs, for example, because in the context of acquisition there would be strong unambiguous empirical evidence showing the raising nature of such verbs in infinitival complementation structures. As Raposo (1989: 297) puts it, 'raising and inflected infinitives are in sharp complementary distribution'. This is an expected result given standard assumptions with respect to Case assignment.

Nevertheless, things are not as clear-cut as we might think by looking at standard European Portuguese data only. Sentence (14.27) below shows that in non standard

varieties of European Portuguese an inflected infinitive can indeed be embedded under a modal verb. I will not pursue here an analysis of such sentences.[13] What I want to note is that this type of structure does not seem to be a recent innovation. Maurer (1968) was able to gather a few examples in Portuguese texts from the fifteenth century on—see example (14.28) below.

(14.27) *Deverão* os condóminos com
must-FUTURE-3PL the flat-owners with
quotas em atraso
payments (to the condominium) in delay
efectuarem o pagamento das mesmas
make-INFLECTED-INFIN-3PL the payment of-the same
'The flat-owners must set the payments owed to the condominium'
(Information placed on the elevator of a condominium. Braga, April 2001)

(14.28) os devotos do Santo *procuraram* *mostrarem*
the devotees of-the Saint sought-3PL show-INFLECTED-INFIN-3PL
todo o género de metro e diversidade da língua
all the kind of meter and diversity of-the language
'The Saint's worshipers sought to explore all the rhythm patterns and expressive potential of the language'
(Sixteenth/seventeenth century. Frei Luís de Sousa. Maurer 1968: 166)

Maurer (1968) stresses, however, that it is in the context of coordination and gapping that the inflected infinitive is attested more often in association with control and raising verbs. Sentences (14.29) to (14.31) below are relevant examples. In these sentences the inflected infinitive emerges only when the infinitival complement depends on a phonetically unrealized main verb; otherwise, it is the simple infinitive that shows up. Once more, gapping in the context of coordination appears to make way for the inflected infinitive.

(14.29) *podem* chegar a *introduzir* a quem quiserem,
can-PRESENT-3PL get to introduce-INFIN to whom want
e *desviar* e *excluírem* a quem
and remove-INFIN and exclude-INFLECTED-INFIN-3PL to whom
não quiserem
not want
'They can bring into their circle whoever they wish as they can dismiss and exclude whoever they do not favour'
(Seventeenth century. António Vieira. Maurer 1968: 166)

[13] These sentences may be analyzed as instances of 'hyper-raising' (see Ura 1994). See Martins and Nunes (2005, 2009) who deal with instances of hyper-raising in Brazilian Portuguese, namely subject raising from an embedded finite clause.

(14.30) *Poderão* *semear* nesse chão aveia ou luzerna, ou
can-FUTURE-3PL grow-INFIN in-that ground oat or alfalfa, or
deixarem-no para escalracho e cardos
leave-INFLECTED-INFIN-3PL-it to grass and wild-vegetation
They have the choice of either cultivate the fields or leave them abandoned'
(Nineteenth century. Castilho. Maurer 1968: 167)

(14.31) O lago *começava a secar* e os reclusos *a*
the lake began to dry and the prisoners to
morrerem
die-INFLECTED-INFIN-3PL
'The lake was drying and the prisoners were dying'
(Twentieth century. Ferreira de Castro. Maurer 1968: 167)

Sentences such as (14.27)–(14.28), where the inflected infinitival clause is the complement of a spelled out raising/control verb, are clearly non- standard in European Portuguese (EP) and are rejected as ungrammatical by speakers of the standard variety. However, sentences such as (14.29)–(14.31), where the inflected infinitival clause is the complement of a gapped verb, are felt as slightly marginal but acceptable by the same speakers who reject (14.27)–(14.28).

The contrast may be handled by endorsing the view that ellipsis is a PF deletion operation that may have a 'healing' effect on otherwise ungrammatical structures, as proposed by Lasnik (1995, 1999), Kennedy and Merchant (2000), Merchant (2001). Sentences with subject raising from an inflected infinitival clause (see (14.27)–(14.28)) are ungrammatical in standard European Portuguese because there are two Nominative-assigning T heads but only one DP to be assigned Nominative Case. Assuming the Agree-based system developed in Chomsky (2000, 2001), in such sentences only one of the T heads can have its uninterpretable ϕ-features valued and deleted under Agree with the DP to the which the Nominative Case is assigned. Hence the derivation crashes because one of the T heads ends up with its uninterpretable features undeleted. Now, if T with undeleted uninterpretable features can be itself marked for deletion at spell-out because coordination licenses ellipsis/gapping, PF deletion of the portion of structure containing the 'offensive' features rescues the derivation. In the second member of coordinate structures displaying gapping of the control/raising verb (see (14.29)–(14.31)), the embedded T has its uninterpretable ϕ-features deleted in the 'regular' way (as a result of the Agree operation) while the matrix T is itself deleted at PF as part of the gapping process.

The lasting presence of sentences such as (14.29) to (14.31) in the speech community is presumably what allows a few speakers in each generation to acquire the non-standard structure represented by sentences (14.27)–(14.28), where raising and inflected infinitives coexist.

14.6 Conclusion

I have shown in this chapter how structurally ambiguous sentences involving coordination, gapping, and independent inflected infinitival clauses with imperative import triggered the emergence of the inflected infinitive and of predicative negation in the clausal complements of ECM verbs. To some extent, the change affects the clausal complements of control and raising verbs as well.

In ambiguous contexts (with sentence initial coordination), the independent inflected infinitive came to be interpreted as an infinitive embedded under a phonetically unrealized finite verb. In sixteenth-century prose, when the new structure came to be common, inflected infinitives dependent on ECM verbs are often found precisely in the second conjunct of a coordinate structure allowing a gapped verb. This is in accordance with the view that such configurations fed the change. In addition, the Old Portuguese independent mandatory inflected infinitive disappears from the records after the inflected infinitive embedded under ECM verbs comes into play. This relative chronology suits the proposed scenario for change.[14]

The case study presented in this chapter suggests that configurations of structural ambiguity allowed by coordination can be perennial triggers for change. Change induced in this way may arise in individual grammars (as a result of language acquisition) in the absence of any change in the PLD available to native learners. Unless it comes to diffuse, grammatical change so induced may give rise to stable variation across time. The marginal structures with inflected infinitives embedded under raising/control verbs, which were identified in Section 14.5 above, appear to be an example of this type of situation.

A low level of frequency of an innovative grammar within a speech community may keep the innovation unnoticed (see Hale 1998). So the fact that it is only from the fifteenth century onward that the inflected infinitive is attested as a complement of ECM verbs does not necessarily show that it was nonexistent before.[15] The question of how the grammars of individuals happen to propagate through the speech community, hence acquiring visibility, is more likely to be successfully tackled by computer modeling expertise than by skilful scanning of preserved texts.

[14] It remains unclear, however, why the independent inflected infinitive did not persist in tandem with the inflected infinitive embedded under causative verbs. For a possible line of explanation, see footnote (12) above.

[15] Note that the kind of structure that triggered the change was already available in the twelfth century (see Section 14.4 above).