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The non-anteriority compound gerund and its licensing conditions

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Resumo

Esta dissertação tem como tópico o gerúndio composto (*tendo* + particípio passado; doravante GC) em orações adverbiais em português europeu e insere-se no marco teórico do Programa Minimalista (Boeckx 2006). Para referir as relações discursivas será usada a terminologia proposta por Asher e Lascarides (2005).

Tradicionalmente considerava-se que o GC em português expressa uma relação de anterioridade relativamente à situação descrita pela frase matriz. No entanto, em certas construções, o GC pode veicular outros valores temporais, nomeadamente posterioridade relativamente à situação descrita pela oração principal, inclusão temporal ou relações discursivas que não especificam a ordenação temporal das duas situações, como tem sido notado por vários autores em trabalhos mais recentes (cf. por exemplo Leal 2001; Móia e Viotti 2004, 2005; Lobo 2006, 2013; Cunha, Leal e Silvano 2008). Este GC de não anterioridade ainda é um tópico pouco estudado e mal compreendido. Os trabalhos sobre o gerúndio mais recentes têm descrito algumas das suas particularidades, nomeadamente que (i) o GC de não anterioridade só pode ocorrer à direita da matriz, (ii) o verbo da frase matriz ocorre num tempo com o traço [+ ANT], isto é, num tempo verbal que localize a situação por ele descrita antes do momento de enunciação, e (iii) o GC pode alternar livremente e sem alteração de significado com o gerúndio simples, em certos casos. Estas três propriedades e restrições de ocorrência não se verificam para o GC de anterioridade. No entanto, relativamente ao GC de não anterioridade, os trabalhos acima mencionados são, na sua maioria, meramente descritivos e não propõem uma explicação para as particularidades observadas. Para além disso, as poucas tentativas de explicação feitas até agora assumem implicitamente uma abordagem morfológica (cf. por exemplo Leal 2001; Cunha, Leal e Silvano 2008; Oliveira 2013), que não consegue dar conta de todas as possíveis ocorrências do GC de não anterioridade. Estas análises assumem que o GC adjunto à direita da frase matriz tem a particularidade de poder expressar tanto anterioridade à situação descrita pela oração matriz, como

anterioridade ao momento de enunciação. No entanto, esta afirmação é empiricamente falsa, pois são possíveis frases em que o GC não expressa nem anterioridade ao momento de enunciação nem anterioridade à situação descrita pela frase a que está adjunto.

Nas línguas germânicas observa-se um fenómeno semelhante, nomeadamente os chamados particípios parasíticos. Wurmbrand (2012) refere três características comuns destes particípios: (i) são opcionais e alternam livremente com o infinitivo, (ii) só podem ocorrer c-comandados por certos núcleos e (iii) não possuem valor semântico perfetivo, tendo a mesma interpretação que o infinitivo. Se compararmos estas três propriedades com as propriedades do GC de não anterioridade, observamos (apesar das várias diferenças) um certo paralelismo. Isto poderia ser um indício de que ambos os fenómenos se baseiam no mesmo mecanismo sintático. Wurmbrand propõe uma análise sintática dos particípios parasíticos que se baseia na valoração de traços temporais subespecificados em Upward Agree.

O primeiro objetivo desta dissertação é, portanto, oferecer uma descrição tanto quanto possível exaustiva das possíveis ocorrências do GC de não anterioridade, descrever as suas particularidades, rever as análises propostas na literatura e avançar com uma análise sintática, semelhante àquela proposta para os particípios parasíticos, que consiga captar todas as particularidades observadas. Defenderei que o GC de não anterioridade é estruturalmente diferente do tradicional GC de anterioridade e surge de forma parasítica em certas configurações sintáticas. Assumindo com Lobo (2006) que o núcleo T das gerundivas é inserido na derivação com traços temporais subespecificados e que o complexo V-T tem de subir para C, defenderei que, no caso do GC de não anterioridade, o núcleo C da gerundiva é defetivo e não permite valorar os traços temporais do T gerundivo. Se o T da gerundiva é c-comandado pelo T matriz e se este T matriz contiver um traço [+ ANT], o T gerundivo valora os seus traços temporais subespecificados contra o T matriz para [+ ANT] em *Upward Agree*. Esta valoração de traços subespecificados permite a ocorrência do GC como marca morfologicamente visível desta relação estrutural necessária para a valoração de traços.

A partir da análise sintática do GC de não anterioridade proposta nesta dissertação, surgem uma série de questões teóricas e empíricas. De um ponto de vista teórico, a direcionalidade tradicionalmente assumida da operação *Agree* (em que a sonda c-comanda o alvo) por exemplo por Chomsky (2000, 2001), Pesetsky e Torrego (2007) ou Bošković (2007) é posta em causa ainda mais (para críticas prévias, cf. Wurmbrand 2012; Zeijlstra 2012; Bjorkman e Zeijlstra no prelo). Além disso, se aceitarmos a aná-

lise sintática proposta nesta dissertação, a divisão binária que foi proposta para as orações gerundivas adjuntas em integradas (adjuntas a uma projeção baixa) e periféricas (adjuntas a uma projeção alta) tem de ser reconsiderada (cf. por exemplo Fernández Lagunilla 1999; Lobo 2006, 2013). De um ponto de vista empírico, a análise sintática do GC de não anterioridade faz uma série de predições sobre a aceitabilidade desta construção em outras línguas românicas. Se a análise sintática for correta, a ocorrência do GC de não anterioridade depende crucialmente da subespecificação de traços temporais no núcleo C da gerundiva. Por este motivo, esperar-se-ia que nas outras línguas românicas, o GC de não anterioridade que veicula relações discursivas que não especificam a ordenação temporal das duas situações (como por exemplo, Continuação, Comentário, Contraste etc.) deveria ser possível.

O segundo objetivo desta dissertação é explorar as implicações teóricas e empíricas da análise sintática proposta. Na parte teórica, serão discutidas diferentes versões da operação de *Agree*, relativamente à direcionalidade desta operação (sentido descendente ou ascendente) e ao *trigger* desta operação (eliminação de traços não interpretáveis ou valoração de traços não valorados). Para além disso, serão discutidas as propriedades geralmente usadas para distinguir gerundivas integradas e periféricas e a adequação destas propriedades para a classificação das gerundivas adjuntas. Na parte empírica, esta dissertação tem o objetivo de proporcionar uma comparação interlinguística com algumas línguas românicas, nomeadamente o catalão, o galego, o francês e o espanhol. Para este efeito, foi revista a literatura sobre o GC nestas línguas. No entanto, este fenómeno é ainda pouco estudado e nenhuma das obras consultadas menciona o GC de não anterioridade, apesar de encontrarmos algumas ocorrências nos *corpora* das diferentes línguas. Por este motivo foi criado um teste de aceitabilidade exploratório, com o objetivo de aferir a disponibilidade do GC de não anterioridade nas línguas referidas. Este teste foi levado a cabo com um grupo relativamente extenso de falantes nativos de galego, espanhol e francês, assim como com um grupo de controlo português. Sendo um teste exploratório, consideraram-se diferentes variáveis possíveis, nomeadamente a presença ou ausência de um sujeito lexicalmente realizado, a relação temporal (anterioridade, posterioridade, inclusão temporal ou relações temporalmente não especificadas), assim como fatores sociolinguísticos, como o conhecimento linguístico explícito do falante. Os resultados foram analisados usando métodos estatísticos, nomeadamente o teste de Wilcoxon (Field 2009). Os resultados deste teste de aceitabilidade revelam que, de facto, o GC que expressa relações discursivas que não especificam a ordenação temporal das duas situações é aceitável em to-

das as línguas testadas. Isto é um argumento adicional a favor da análise sintática proposta previamente. O GC de posterioridade, por outro lado, é geralmente rejeitado pelos informantes das três línguas românicas. O GC de inclusão temporal, ainda por outro lado, apresenta resultados pouco conclusivos e que apontam para a influência de fatores extralinguísticos, nomeadamente o conhecimento linguístico explícito do informante. Serão necessários estudos mais aprofundados e direcionados para responder às várias questões de investigação que surgiram desta dissertação.

Palavras chave: gerúndio composto, orações adjuntas, Upward Agree, traços temporais

Abstract

This study focuses on the compound gerund (CG) in adjunct clauses. In European Portuguese, contrary to traditional descriptions (e.g. Cunha and Cintra 1987), this form (gerund of the auxiliary *ter* 'have' + past participle) can express not only anteriority, but various other types of temporal ordering, in connection with a whole range of different rhetorical relations, namely posteriority, temporal inclusion and temporally unspecified discourse relations (henceforth the non-anteriority CG).

This non-anteriority CG is an understudied and still poorly understood phenomenon. Previous accounts of the gerund in European Portuguese remain largely descriptive and do not fully capture the variety of possible occurrences of this structure (see for example Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008). The first goal of this study is, therefore, to further explore the temporal interpretations of the CG in adjunct clauses, and to develop a syntactic analysis of the non-anteriority CG within the framework of the Minimalist Program (Boeckx 2006).

Previous accounts assume that the compound gerund normally expresses anteriority to the situation described by the clause to which it is adjoined, and that sentence-final adjoined clauses have the particularity that they can also express anteriority to the utterance time. However, empirically this assumption is not borne out. I will alternatively propose a syntactic analysis that explains the non-anteriority CG through feature underspecification on the gerund T head and subsequent valuation of these features in Upward Agree. Based on this syntactic analysis, a series of theoretical and empirical questions arise. From a theoretical perspective, the downward directionality of Agree, as traditionally assumed (e.g. by Chomsky 2000, 2001; Pesetsky and Torrego 2007), is further put into question (for previous criticism see, for example, Wurmbrand 2012; Zeijlstra 2012). Furthermore, if we accept a syntactic analysis of this phenomenon, then the classic binary division of gerund adjunct clauses into integrated (low adjunction) and peripheral (high adjunction) (see for example Fernández Lagunilla 1999; Lobo 2006, 2013) needs to be recon-

sidered. From an empirical perspective, a syntactical analysis of the non-anteriority CG in Portuguese makes a series of predictions on its availability in certain constructions. Furthermore, it predicts that at least one type of non-anteriority CG (the one expressing temporally unspecified discourse relations) should be available in other Romance languages. The second goal of this study is, therefore, to explore some of the theoretical and empirical questions raised by this analysis. In order to broaden the picture and test the hypotheses concerning the availability of the non-anteriority CG in other Romance languages, this study includes a cross-linguistic comparison of a sample of Romance languages (Portuguese, Galician, Spanish and French). Given that there is little research on this phenomenon in other Romance languages, despite the non-anteriority CG being attested in corpora, an exploratory acceptability judgment task was developed. This test was carried out with a relatively large number of native speakers of these three languages and with a Portuguese control group, then analyzed using statistic methods (namely the Wilcoxon rank sum test and the Wilcoxon signed rank test, see Field 2009). The results of this exploratory test not only provide some insight on the availability of the non-anteriority CG constructions in these Romance languages, but also shed some light on the range of temporal interpretations of the gerund, in general, in these languages.

Keywords: compound gerund, adjunct clauses, Upward Agree, temporal features

Abbreviations

ANT   ANTERIOR

AUX   auxiliary

CG   compound gerund

CL   clitic

DEF   definite

EP   European Portuguese

ev   eventuality

EXIST   existential

FUT   future

GER   gerund

IMPF   imperfect

INF   infinitive

IPP   *infinitivus pro participio*

n   now

ParPar   parasitic participle

PP   past participle

PERF   perfective

P   plural

POST   POSTERIOR

PREP	preposition
PRS	present
PPS	*pretérito perfeito simples*
S	singular
SBJ	subjunctive
SG	simple gerund
TPpt	temporal perspective point

Chapter 1

Introduction

This study focuses on the compound gerund (henceforth, CG) in adjunct clauses. In European Portuguese, contrary to traditional descriptions (e.g. Cunha and Cintra 1987), this form (gerund of the auxiliary *ter* 'have' + past participle) can express not only anteriority (as illustrated in (1)), but various other types of temporal ordering, in connection with a whole range of different rhetorical relations, namely posteriority, temporal inclusion and temporally unspecified discourse relations (henceforth the non-anteriority CG, illustrated in (2), (3) and (4), respectively).

(1) *Tendo   acabado   as   aulas,   o   Hugo   foi   almoçar.*
    AUX.GER finish.PP the classes the Hugo went lunch
    '(After) having finished classes, Hugo went to have lunch.'

(2) *O   Miguel saiu   de   casa,   tendo   ido   diretamente para o*
    the Miguel left   of   home AUX.GER go.PP directly   to   the
    aeroporto.
    airport
    'Miguel left home and went directly to the airport.'

(3) *A   Rita passou o   fim-de-semana em Barcelona, tendo*
    the Rita spent   the weekend   in   Barcelona   AUX.GER
    visitado a   Sagrada Família e   a   Casa Amatller.
    visit.PP the Sagrada Familia and the Casa Amatller
    'Rita spent the weekend in Barcelona and visited the Sagrada Familia and the Casa Amatller.'

(4) *Na época passada, o FC Porto só perdeu fora uma*
in.the season last the FC Porto only lost away one
vez, em Braga, tendo vencido em todas as outras cidades.
time in Braga AUX.GER win.PP in all the other cities
'Last season, the FC Porto only lost one away match, in Braga, and
won in all other cities.'

This non-anteriority CG is an understudied and still poorly understood
phenomenon. Previous accounts of the gerund in Standard European Por-
tuguese[1] remain largely descriptive and do not fully capture the variety
of possible occurrences of this structure (see for example Leal 2001; Móia
and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008; Oliveira 2013).
The first goal of this study is, therefore, to further explore the temporal
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classic binary division of gerund adjunct clauses into integrated (low ad-
junction) and peripheral (high adjunction) (see for example Fernández La-
gunilla 1999; Lobo 2006, 2013) needs to be reconsidered. From an empir-
ical perspective, a syntactical analysis of the non-anteriority CG in Por-
tuguese makes a series of prediction on its availability in certain construc-
tions. Furthermore, it predicts that at least one type of non-anteriority CG

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[1]This dissertation only considers the gerund in the standard variety of European Por-
tuguese. Note, however, that there are several dialectal varieties that allow for person
and number inflection of the gerund (the so-called *gerúndio flexionado*; see for example
Lobo 2016). This inflected gerund in non-standard varieties may present different tem-
poral interpretations. The discussion of this topic lays beyond the scope of the present
work.

(the one expressing temporally unspecified discourse relations) should be available in related Romance languages.

The second goal of this study is, therefore, to explore some of the theoretical and empirical questions raised by this analysis. In order to broaden the picture and test the hypotheses concerning the availability of the non-anteriority CG in other Romance languages, this study includes a cross-linguistic comparison of a sample of Romance languages (Portuguese, Galician, Spanish and French). Given that there is little research on this phenomenon in other Romance languages, despite the non-anteriority CG being attested in corpora, an exploratory acceptability judgment task was developed. This test was carried out with a relatively large number of native speakers of these three languages and with a Portuguese control group, then analyzed using statistic methods (namely the Wilcoxon rank sum test and the Wilcoxon signed rank test, see Field 2009). The results of this exploratory test not only provide some insight on the availability of the non-anteriority CG constructions in these Romance languages, but they also shed some light on the range of temporal interpretations of the gerund, in general, in these languages.

This dissertation is structured into two parts. Part I focuses on the compound gerund in European Portuguese: Chapter 2 gives a brief overview of the gerund constructions in Portuguese, before laying out the semantic framework that will be adopted and the terminology that will be used to describe discourse relations in this work. This is followed by a comprehensive description of the temporal values associated to the CG, and an overview of the distributional properties that reveal a clear asymmetry between the anteriority and the non-anteriority CG. These properties concern the position where the gerund clause can occur, its dependence on the main clause verb form and the possible alternation between the simple and the compound form. The chapter concludes with a review of previous analyses of the non-anteriority CG and their limitations. Chapter 3 explores the parasitic participles (ParPars) that occur in many Germanic languages (e.g. German, Dutch, Norwegian, Frisian). The term "parasitic participle" designates the occurence of a participle in a syntactic context in which an infinitive would be expected. The chapter gives a brief overview of the different types of ParPars and describes the syntactic analysis of these constructions proposed by Wurmbrand (2012). A comparison between the non-anteriority CG in Portuguese and the ParPars reveals a series of similarities between the two phenomena. Chapter 4 introduces a syntactical analysis of the non-anteriority CG in Portuguese, which is inspired by Wurmbrand's analysis of the ParPars. The proposed analysis relies crucially on the upward directionality of Agree, and therefore the the-

oretical debate on this topic will be briefly illustrated, by presenting five prominent versions of Agree, namely those proposed by Chomsky (2000, 2001), Pesetsky and Torrego (2007), Bošković (2007), Wurmbrand (2012) and Zeijlstra (2012). The chapter concludes summarizing the advantages and possible problems which arise from the proposed syntactical analysis of the non-anteriority CG, both regarding the structure itself, as well as regarding the general classification of adjunct gerund clauses in general (see for example Fernández Lagunilla 1999; Lobo 2013).

Part II of this dissertation offers a cross-linguistic comparison of the CG in different Romance languages. To the best of my knowledge, the non-anteriority CG has never been studied in other Romance languages. However, we easily find occurrences of this phenomenon in corpora. A comparative analysis can provide not only a first description of the availability of the non-anteriority CG in these closely related languages, but also provide further insight into the adequacy of the proposed syntactical analysis. Chapter 5 provides an overview of the use of the gerund in Catalan, French, Galician and Spanish, according to normative and/or descriptive grammars, and shows that the non-anteriority CG has not been described in any of these languages. Furthermore, the cross-linguistic differences in the general use of the gerund will be discussed (e.g. subject position), since they are likely to influence the availability of the non-anteriority CG. Chapter 6 describes the exploratory acceptability judgment test. This test was developed, on the one hand, to empirically confirm the properties described for the Portuguese non-anteriority CG, and, on the other hand, to test the hypotheses following from the syntactic analysis formulated in Chapter 4. The chapter lays out the hypotheses that will be tested, and provides an overview of the informants that were considered for the ensuing analysis, before providing a statistical analysis of the results and discussing the findings. Chapter 7 concludes this dissertation. The proposed syntactical analysis neatly accounts for the asymmetries between the anteriority and the non-anteriority CG. Furthermore, most of the predictions made by this analysis are borne out empirically. However, it also raises a series of theoretical questions; e.g. on the classification of gerund clauses, the directionality of Agree, the syntactic feature theory, among others. Furthermore, the findings of this dissertation open up a whole set of unexplored research topics, such as the diachrony of the non-anteriority CG, the role played by sociolinguistic factors, the role of discourse relations, the acquisition of this structure, to give just a few examples.

Part I

The compound gerund in European Portuguese

Chapter 2

Object of study

2.1 The gerund in European Portuguese - a brief overview

The gerund is part of the group of tenseless verb forms (together with the infinitive and the past participle), which means that the gerund, on its own, cannot locate the situation it identifies in time (Oliveira 2013: 549). The gerund possesses a simple and a compound form. The simple gerund (SG) is formed by adding the suffix *-ndo* to the verb stem (including the thematic vowel), e.g. *cantar* 'to sing' → *cantando* 'singing', whereas the compound form is composed by the gerund of the auxiliary verb *ter* 'to have' and the past participle of the main verb, e.g. *tendo cantado* 'having sung'. In European Portuguese, the gerund can occur in a series of different contexts, which will briefly presented in this section. Móia and Viotti (2004) provide a comprehensive description of the possible occurrences of this verb form, and propose at least five distinct subtypes.

a. Independent gerund

Generally, being a tenseless verb form, the gerund can only appear in embedded clauses. However, Móia and Viotti (2004: 112) mention - based on previous descriptions in the literature - at least two instances where the gerund can occur on its own, as exemplified in (5) and (6). In the former, the gerund has the value of an imperative, whereas in the latter, the gerund appears in a predicative construction, where it functions as a nominal modifier to *mulheres* 'women'. However, this independent occurrences of the gerund are rather rare, and are limited to very specific contexts.

(5) *Andando já   para casa!*
go.GER   already   to   home
'Go home immediately!'

(6) *Mulheres vendendo tapetes no   mercado*
women   sell.GER   rugs   on-the   market
'Women selling rugs on the market' [PHOTOGRAPH CAPTION]

(Móia and Viotti 2004: 112-113)

b. Argumental gerund

The gerund can also occur in complement clauses of perceptive verbs, such as *ver* 'to see' or *ouvir* 'to listen'. This is illustrated in (7). Furthermore, gerund clauses can appear in subject position, as complement of certain nouns, such as *situação* 'situation' or *problema* 'problem', as shown in (8).

(7) *A   Clara   viu   o   Mário   comendo maçãs.*
the   Clara   saw   the   Mário   eat.GER   apples
'Clara saw Mário eating apples.'

(8) *Alunos   fazendo   muito barulho nos   corredores é   um*
students   make.GER   much   noise   in-the   corridors   is   a
problema frequente.
problem   frequent
'Students making a lot of noise in the corridors is a frequent problem.'

c. Periphrastic gerund

Furthermore, the gerund can occur in a wide range of (traditionally designated) periphrastic constructions, with verbs such as *estar* 'be', *ir* 'go', *ficar* 'become' or *andar* 'walk', as exemplified in (9a) and (10a). Frequently, in these constructions, the gerund form is equivalent to a construction with the preposition *a* + infinitive, as in (9b). In Standard European Portuguese, the preposition + infinitive construction is nowadays the most commonly used (with most, though not all, auxiliary verbs). The periphrastic gerund is more frequent in certain dialectal varieties of European Portuguese, and is predominant in Brazilian Portuguese (Móia and Viotti 2004: 116). Note,

however, that the periphrastic gerund is not always equivalent to the preposition + infinitive construction, as shown in the contrast between (10a) and (10b). There is much more to be said about the periphrastic gerund; however, since it is not the topic of this dissertation, this brief discussion must suffice (for further discussion see for example Móia and Viotti 2004).

(9) a. *Ela está indo para casa.*
     he is go.GER to home
     'She is going home.'
   b. *Ela está a   ir   para casa.*
     she is PREP go.INF to home
     'She is going home.'

(10) a. *Vão andando, que eu vou lá   ter.*
      go walk.GER that I go there meet
      'Get going, I will meet [you] there.'
    b. *Vão a   andar, que eu vou lá   ter.*
      go PREP walk.INF that I go there meet
      'Go by foot, I will meet [you] there.'

d. Adnominal gerund

Finally, we find gerund clauses which are adjoined to a noun phrase (within a DP), having a restrictive value, as exemplified in (11). Examples of adnominal gerund clauses without a restrictive value, acting as appositions to DPs, also exist, but I will not exemplify them here. This type of structures is also called predicative gerund clauses (for example by Lobo 2006). For a detailed discussion of the distinctive properties that separate adnominal from other adjunct gerund clauses, see Móia and Viotti (2004, 2005) and Lobo (2006).

(11) *Foram encontradas várias caixas contendo   documentos*
     were found   several boxes contain.GER documents
     secretos.
     secret
     'Several boxes containing secret documents were found.'

(Móia and Viotti 2004: 114)

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e. Adverbial (or adjunct) gerund

When the gerund clause is adjoined to a verbal projection, the literature usually speaks of adverbial gerund clauses.The focus of this dissertation lays on the gerund in these adverbial clauses. This structure will therefore be discussed in more detail in the following sections. Henceforth, the term adjunct clause will be used instead of adverbial clause, because - as we will see - in many cases the gerund clause is relatively autonomous and its meaning is not necessarily subordinate, in the relevant way, to that of the main clause verb.

Often, in the literature, a distinction is made between integrated and peripheral adjunct gerund clauses (see for example Lobo 2006, 2013; Oliveira 2013). According to (Oliveira 2013: 549), integrated gerund clauses are usually manner clauses, prosodically dependent on the matrix clause, and temporally overlapping with the situation described by this matrix clause. This is exemplified in (12). Peripheral clauses, on the other hand, are prosodically independent, can occur on the left of the main clause, can present an independent tense, and should be graphically separated by a comma (ibid.). This is exemplified in (13). This distinction will be relevant for the analysis proposed in this dissertation, therefore, this topic will be revisited in more detail in Chapter 4.

(12) *A mãe acalmou o bebé cantando-lhe suavemente.*
tthe mother calmed the baby sing.GER-him softly
'The mother calmed the baby by singing softly.'

(13) *Chegando a casa, a Júlia tirou os sapatos.*
arrive.GER at home the Júlia took-off the shoes
'When she arrived home, Júlia took off her shoes.'

2.2 Discourse relations

For the purposes of this study, I will use the classfication of discourse relations proposed in Asher and Lascarides (2005). The authors define discourse relations, or rhetorical relations, as "[linking] together the contents of the discourse's utterances" (Asher and Lascarides 2005: 1). In this section I will present the subset of discourse relations important for this investigation, grouped by the temporal ordering they impose on the two relevant eventualities.

2.2.1 Anteriority

Retro-narration

Asher and Lascarides (2005) do not consider this rhetorical relation as distinct from the standard Narration, where the events are presented in their chronological order. However, for the sake of clarity, and following Alves (2002: 277), I will use the term Retro-narration for discourse relations in which the second mentioned situation precedes the first one. This is illustrated in (14). Crucially, the second situation does not explain the first, which clearly distinguishes this discourse relation from Explanation. Note that by introducing this new discourse relation, the posteriority discourse relations (Narration and Result) all have symmetric counterparts in the anteriority domain (Retro-Narration and Explanation).

(14) [Sarah went to bed.]$_{ev1}$ [She had already said goodnight to her husband.]$_{ev2}$

Explanation

The rhetorical relation Explanation links cause and effect (Asher and Lascarides 2005: 462), namely in discourse segments where the effect is mentioned before the cause. This discourse relation necessarily entails that the second situation in the discourse segment temporally precedes the first situation. This is exemplified in (15), where ev2 occurs before and causes ev1.

(15) [Sarah is very rich.]$_{ev1}$ [She inherited a lot of money.]$_{ev2}$

2.2.2 Temporal overlapping

In this section both partial or total (strictly temporal) overlapping relations and inclusion (with a mereological component) will be considered.

Background

Background is the rhetorical relation that "holds whenever one constituent provides information about the surrounding state of affairs in which the eventuality mentioned in the other constituent occurred" (Asher and Lascarides 2005: 460). Therefore the interval in which ev1 occurs is included in the interval in which ev2 occurs. This is exemplified in (16).

(16) [Ann woke up.]$_{ev1}$ [It was already morning.]$_{ev2}$

Elaboration

In the rhetorical relation Elaboration, the second situation is part of the first situation (Asher and Lascarides 2005: 161). The temporal relation is therefore one of inclusion, with the interval in which ev2 occurs being included in the interval in which ev1 occurs. A mereological value exists in the sense that the situation which is temporally included is interpreted as being a subsituation of (and, therefore, ontologically dependent on) the broader situation. This is exemplified in (17).

(17) [Jeni went to Granada.]$_{ev1}$ [She visited the Alhambra.]$_{ev2}$

2.2.3 Posteriority

Narration

In the case of the discourse relation Narration, "the temporal order of the events matches their textual order" (Asher and Lascarides 2005: 162). This is exemplified in (18), where ev2 occurs after the ev1.

(18) [Clara went to the beach.]$_{ev1}$ [She swam 30 minutes.]$_{ev2}$

Result

The rhetorical relation Result is the dual to Explanation, and links a cause to its effect (Asher and Lascarides 2005: 462). In the case of Result, the cause is mentioned before the effect in the discourse, as exemplified in (19). This discourse relation entails that ev2 occurs after ev1 and is caused by it.

(19) [Eva inherited a lot of money.]$_{ev1}$ [She is very rich.]$_{ev2}$

2.2.4 Temporally unspecified relations

Continuation

In the rhetorical relation Continuation, the second constituent continues to elaborate on the same topic as the first one (Asher and Lascarides 2005: 15). However, it "lacks the spatio-temporal consequences" of Narration (ibid.: 461). This is exemplified in (20), where both sentences give information on the same topic but the temporal ordering between ev1 and ev2 is unclear.

(20) [Two of the siblings moved to Australia.]$_{ev1}$ [One stayed in Sri Lanka.]$_{ev2}$

The discourse relations described in this section are summarized in Table 1.

Discourse relation	Description	Temporal ordering
Retro-narration	ev2 occurs before ev1	t(ev1) > t(ev2)
Explanation	ev2 causes (and therefore occurs before) ev1	t(ev1) > t(ev2)
Background	ev2 provides a background for ev1	t(ev1) c t(ev2)
Elaboration	ev2 is a part of ev1	t(ev2) c t(ev1)
Narration	ev2 occurs after ev1	t(ev1) < t(ev2)
Result	ev2 is caused by (and therefore occurs after) ev1	t(ev1) < t(ev2)
Continuation	ev1 and ev2 elaborate on the same topic but have no clear temporal relation	t(ev1) ? t(ev2)

Table 1: Summary of the subset of considered discourse relations and their temporal implications

2.3 The temporal and rhetoric relations expressed by the compound gerund in adjunct clauses

In this section, I will present the CG in European Portuguese adjunct clauses and the temporal and discourse relations it can be associated with.

2.3.1 Anteriority compound gerund

The CG is traditionally considered to identify a situation that is anterior to the one expressed by the main clause. In the *Nova Gramática do Português Contemporâneo*, for example, the authors refer that the compound form "é de carácter perfeito e indica uma acção concluída anteriormente à que exprime o verbo da oração principal[2]" (Cunha and Cintra 1987: 487).

This anteriority can either be a simple narrative anteriority, as exemplified in (21) and (23), or express a relation of cause-consequence, as in (22).

(21) *Tendo   tomado o   pequeno-almoço, a   Ana saiu de casa.*
     AUX.GER take.PP the breakfast   the Ana left of home
     '(After) having eaten breakfast, Ana left home.'

(22) *Tendo   saído   tarde de casa, o   Pedro chegou atrasado*
     AUX.GER leave.PP late of home the Pedro arrived late
     ao   trabalho.
     at.the work
     '(Due to) having left home late, Pedro arrived late at work.'

(23) *A   Ana saiu de casa, tendo   tomado o   pequeno-almoço.*
     the Ana left of home AUX.GER take.PP the breakfast
     'Ana left home, (after) having eaten breakfast.'

The anterioritiy CG can appear both to the left and to the right of the matrix clause, as shown in (21) and (23) (see also Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008). This occurrence of the CG is easily explained, since the compound morphology reflects the discourse relation between the gerund and the main clause, i.e. the participle expresses the anteriority of the situation described by the gerund clause with regard to the situation described by the main clause.

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[2]Translation: [the compound gerund] is of perfective nature and indicates an action that is concluded before the one that the main clause verb expresses.

2.3.2 Non-anteriority compound gerund

In addition to the anteriority relation discussed above, the Portuguese CG is also used to express a series of other temporal and rhetoric relations (see Campos 1980; Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008).

Posteriority

As mentioned in the previous section, the CG can express a temporal relation of posteriority. To the best of my knowledge, this has first been noted by Campos (1980, apud Lobo 2006). In these cases, the CG locates the situation it identifies after the situation described by the main clause, as exemplified in (24). Lobo (2006: 10) refers the possibility of the CG presenting a posteriority interpretation as a characteristic of gerund clauses that are peripherally adjoined to the right of the main clause.

(24) *A Sara saiu de casa, tendo ido diretamente para o*
the Sara left of home AUX.GER go.PP directly to the
aeroporto.
airport
'Sara left home and went directly to the airport.'

Based on data from the *corpus* CETEMPúblico, Cunha et al. (2008) study the temporal and rhetoric relations between the situation described by the gerund clause and the situation described by the matrix clause. The authors find the Narration relation to be the most frequent one in postposed CG clauses (ibid.: 266), as exemplified in (25).

(25) *A mulher de Honecker, Margot, abandonou ontem a*
the wife of Honecker Margot abandoned yesterday the
*embaixada chilena em Moscovo, **tendo seguido***
embassy Chilean in Moscow AUX.GER continue.PP
directamente para Santiago do Chile.
directly to Santiago of.the Chile
'Honecker's wife, Margot, left yesterday the Chilean embassy in Moscow, and went directly to Santiago de Chile.'

(CETEMPúblico, apud Cunha et al. 2008: 267)

However, we also find compound gerunds that express causal posteriority, i.e. the rhetoric relation of Result, as exemplified in (26).

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(26) *Portanto, ganhei   em 1975, depois em 1977 e   em 1979,*
So   won.1S in 1975 then   in 1977 and in 1979
tendo   *pois*   **_sido_** *a   única a   ter   ganho trés*
AUX.GER therefore be.PP the only   to AUX.INF win.PP three
vezes seguidas os Campeonatos   da   Europa e   a
times in.a.row the championships of.the Europe and to
receber a   grande taça, que   ficou   na   Roménia.
receive the great   cup   which stayed in.the Romania
'So, I won in 1975, then in 1977 and in 1979, therefore I was the only
one who three times in a row the European championships and
who received the great cup, which stayed in Romania.'

(CETEMPúblico, ext372662-des-92a-1)

Temporal overlapping

The CG can also express temporal overlapping relations between the situations described by the gerund and the main clause. Cunha et al. (2008) refer the possibility of postposed CG expressing the discourse relations Elaboration and Background (see Chapter 2.2). This is exemplified in (27) e (28), respectively.

(27) *A   Sandra passou o   fim-de-semana em Barcelona, tendo*
the Sandra spent the weekend   in Barcelona AUX.GER
visitado a   Sagrada Família e   a   Casa Amatller.
visit.PP the Sagrada Familia and the Casa Amatller
'Sandra spent the weekend in Barcelona and visited the Sagrada
Familia and the Casa Amatller.'

(28) *A   Maria viu passar vários iates   de luxo,   tendo*
the Maria saw pass   several yachts of luxury AUX.GER
estado deitada na   praia toda a   tarde.
lie.PP on.the beach all   the   afternoon
'Maria saw several luxuary yachts pass by, while laying on the
beach all afternoon.'

(adaptation of Móia and Viotti 2005: 723)

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Unspecified temporal relations

Móia and Viotti (2005: 720-21) underline that even though the adverbial gerund cannot link semantically unconnected situations, as shown by the ungrammaticality of (29), it is frequently used in "descrições de situações sem uma relação temporal claramente definida[3]" (ibid.). The authors call this the Neuter Gerund (ibid.: 724). This is exemplified in (30), where the temporal relation between the different events is unclear. The rhetoric relation between the main clause and the gerund clause is one of Continuation (see chapter 2.2).

(29) *Houve   um terramoto   na   Ásia, tendo   a   CGTP*
     EXIST.PPS a   earthquake in.the Asia AUX.GER the CGTP
     anunciado   uma greve geral   para Setembro.
     announce.PP a   strike general for   September
     'There was a earthquake in Asia, and the CGTP announced a general strike for September.'

(Móia and Viotti 2005: 719)

(30) *Só   perdeu uma vez, em Braga, e   pela   margem mínima,*
     only lost   one time in   Braga and by.the margin minimal
     tendo   vencido por três   ocasiões   e   empatado duas.
     AUX.GER win.PP for three occasions and tie.PP   two
     '[The team] only lost once, in Braga, and by one goal, won three times and tied two.'

(CETEMPúblico, ext1130790-des-96b-1)

2.4   Particularities of the non-anteriority compound gerund

In this section, I will discuss the grammatical restrictions that the non-anteriority CG presents, as opposed to the anteriority compound gerund (see also Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008).

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[3]Translation: descriptions of situations without a clearly defined temporal relation

Sentence-initial/final position

As mentioned in section 2.3.1, the anteriority CG can occur both to the left and to the right of the main clause, as exemplified in (31a) and (31b).

(31) a. *Tendo   tomado o   pequeno-almoço na   cozinha a*
AUX.GER take.PP the breakfast   in.the kitchen in
correr, a   Ana saiu de casa.
run   the Ana left of home
'(After) having hastily eaten breakfast in the kitchen, Ana left home.'

   b. *A   Ana saiu de casa,   tendo   tomado o   pequeno-almoço*
the Ana left of home AUX.GER take.PP the breakfast
na   cozinha a   correr.
in.the kitchen in run
'Ana left home, (after) having hastily eaten breakfast in the kitchen.'

The non-anteriority CG, on the other hand, is restricted to the right position of the main clause. This is exemplified in (32a) and (32b) for the posteriority CG.

(32) a. **Tendo   tomado o   pequeno-almoço no   caminho para*
AUX.GER take.PP the breakfast   on.the way   for
o   trabalho, a   Ana saiu de casa.
the work   the Ana left of home
'Ana left home and had breakfast on her way to work.'

   b. *A   Ana saiu de casa,   tendo   tomado o   pequeno-almoço*
the Ana left of home AUX.GER take.PP the breakfast
no   caminho para o   trabalho.
on.the way   for   the work
'Ana left home and had breakfast on her way to work.'

Verb form in the matrix clause

The anteriority CG can occur with any tense in the main clause, as shown in (33). The non-anteriority CG, on the other hand, can only co-occur with certain verb tenses in the main clause, as shown in (34).

(33) *Tendo   acabado o   trabalho, a   Ana {saiu   /*
AUX.GER finish.PP the work   the Ana leave.PPS /
saía   / sai   / sairá}   do   escritório.
leave.IMPF / leave.PRS / leave.FUT of.the office

'(After) having finished her work, Ana {left/was leaving/leaves/will leave} the office.'

(34)   *A   Ana   {saiu   /   saía   /   *sai   /   *sairá}   de*
      the Ana leave.PPS / leave.IMPF / leave.PRS / leave.FUT of
      casa,   tendo   ido   diretamente ao   aeroporto.
      home AUX.GER go.PP directly   to.the airport
      'Ana {left/was leaving/leaves/will leave} home, and went directly to the airport.'

In an exploratory study, based on data from the *corpus* CETEMPúblico, the non-anteriority CG only appeared with the following verb tenses in the main clause: *pretérito perfeito simples*, *pretérito perfeito composto*, *pretérito imperfeito*, *pretérito mais-que-perfeito simples*, *pretérito mais-que-perfeito composto*, and *condicional presente*. What these tenses have in common is that they locate the beginning of the event they are associated with before the utterance time (beg(ev) < n).

It is possible to construct sentences - namely with the *presente* (simple present) - that apparently illustrate other matrix tense possibilities for the non-anteriority CG, as exemplified in (35). However, these cases require a more fine-grained analysis.

(35)   *A   Maria <u>vive</u>   em Paris desde 1990, **tendo**   **comprado***
      the Maria live.PRS in Paris since 1990 AUX.GER buy.PP
      uma casa   nessa cidade em 2003.
      a   house in.this city   in   2003
      'Maria has been living in Paris since 1990, and bought a house in this city in 2003.'

(36)   *A   Maria {vive / está neste   momento a   viver} em Paris,*
      the Maria lives   is   in.this moment PREP live   in   Paris
      tendo   comprado *uma casa   nessa cidade em 2003.*
      AUX.GER buy.PP   a   house in.this city   in   2003
      'Maria {lives / is living at the moment} in Paris, and bought a house in this city in 2003.'

In a first (superficial) analysis, we could hypothesize that, given the relation 1990/2003, this sentence illustrates a posteriority CG, and constitutes therefore an exception to the generalization that, with this type of CG, the main clause tense needs to be past. However, in a deeper analysis, we realize that we are indeed before an anteriority CG. Note that

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the use of the present tense *vive* 'lives' puts the temporal perspective point on the utterance time. The event described in the gerund clause is prior to that perspective point, and hence the gerund is truthfully an anteriority one. See also sentences with present tense and without the *desde* 'since' adverbials, which are unequivocal illustrations of anteriority relations, such as (36).

Free variation with the simple gerund

Another particularity of the non-anteriority CG is the fact that it can often be substituted by the SG, without that this substitution affects the meaning of the sentence. Móia and Viotti (2005: 725) already noted that "por vezes, parece não haver diferenças semânticas significativas entre as duas formas[4]". This alternation between the two forms is exemplified in (37) for the posteriority CG, and in (38) for the overlapping CG.

(37) *A* *Clara* *saiu* *de* *casa,* *{tendo*   *ido*   */* *indo}*   *diretamente*
  the Clara left of home AUX.GER go.PP / go.GER directly
  para *o*   *aeroporto.*
  to   the airport
  'Clara left home and went directly to the airport.'

(38) *A* *Marisa* *temperou* *a*   *carne,* *{tendo*   *usado* */* *usando}*
  the Marisa seasoned the meat AUX.GER use.PP / use.GER
  muito *sal.*
  much salt
  'Marisa seasoned the meat, using a lot of salt.'

The anteriority CG, on the other hand, does not allow the substitution by the SG without affecting the meaning, as shown in (39).

(39) *O* *Pedro* *foi*   *para* *casa,* *{tendo*   *acabado* */* **acabando}*
  the Pedro went for   hom AUX.GER finish.PP / finish.GER
  o *trabalho.*
  the work
  'Pedro went home, (after) having finished work.'[5]

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[4]Translation: sometimes, there seems to be no significant semantic difference between the two forms

[5]In this sentence, the simple form (not preceded by comma) is only possible with a non-anterior reading, in the varieties that (unlike standard contemporary European Portuguese (EP)) use gerund instead of preposition a + infinitive); the (pragmatically

2.5 Previous analyses of the non-anteriority compound gerund and their limitations

So far, there has been no targeted research on the non-anteriority CG in Portuguese. There are, however, several studies on the gerund in general that mention this phenomenon (for example Campos 1980; Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008). Most of these studies implicitly assume a morphological analysis of the non-anteriority CG, i.e. the compound form is selected from the verbal paradigm to express certain values. Lobo (2006: 10, 13), for example, states that the possibility of the CG expressing posteriority is a property of sentence-final peripheral gerund clauses, and that the temporal interpretation of gerund clauses (both with the simple and the compound form) depends on a series of semantic and pragmatic factors.

In order to account for the posteriority CG, Cunha et al. (2008: 271) defend the following idea about the temporal interpretation of the CG:

> [...] quando a oração gerundiva segue a oração principal, o PPT seleccionado tanto poderá ser fornecido pela frase matriz quanto pelo momento da enunciação; pelo contrário, quando a gerundiva precede a principal, apenas esta última estará em condições de proporcionar um PPT viável para a computação temporal do Gerúndio Composto.[6]

Leal (2001) provides the most comprehensive description of the temporal and discourse relations available for the CG. For the case of the postposed CG, the author notes that the anteriority reading is the only one available if there is no pause between the two clauses (ibid.: 91). On the other hand, if there is a pause between the two clauses, he claims that the posteriority reading of the gerund clause event with respect to the main clause event is the preferential interpretation (ibid.: 87). However, Leal's study should be treated with some caution, for the following reasons.

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unnatural reading) would be that Pedro is finishing his work on its way home:

i. *O   João foi   para casa   acabando   (= a   acabar)   o   trabalho.*
   the   João went   to   home finish.GER PREP finish.INF the   work

   'João finished his work on the way home.'

[6]Translation: [...] when the gerund clause follows the main clause, the TPpt [Temporal Perspective Point] selected can be provided either by the main clause or by the utterance time; on the other hand, when the gerund clause precedes the main clause, only the latter [the main clause] is able to provide a viable TPpt for the temporal computation of the compound gerund.

First of all, Leal's analysis seems to be exclusively based on the author's introspection, and not on more representative empiric data. Especially the alleged preference for an anterior or posterior reading depending on the occurrence of a pause between the two sentences seems highly debatable, not to mention that in spoken language the presence of pauses strongly depends on the speech rate, making judgments difficult to assess. In written language, on the other hand, it would require a psycholinguistic study, involving eye-tracking or measuring of reaction time, to determine whether a pause is present in the reader's mind. Since the temporal interpretation (anterior or non-anterior) strongly depends on the lexical content of the gerund clause and on the pragmatic information, in the reading process this would additionally cause a look-ahead problem, in the sense that the reader might initially read the sentence without pause, and only later infer that the interpretation is one of posteriority. Therefore, further empirical studies with a higher number of informants would be necessary to conclude that the presence of a pause is a determining factor for the temporal interpretation.

Second, Leal bases his analysis on sentences in which the main clause verb appears in the *pretérito perfeito simples* (PPS). This raises several questions. Even if we accept the relevance of pauses for the preferential interpretation of the gerund clause in sentences whose matrix verb appears in PPS, this cannot be generalized to sentences whose matrix verb appears in a non-past tense. This is exemplified in (40), where the matrix verb appears in a future tense. In this case, the only available interpretation is that of anteriority, despite the fact that the sequence can obviously be read with a relatively long pause before the gerund clause. This shows that the presence or absence of a pause cannot be the determining factor for the temporal interpretation of postposed CG clauses.

(40) *Cada um dos membros da Comissão Directiva ficará*
each one of.the members of.the committee directive be.FUT
também encarregue [sic] de promover as eleições em cada um
also responsible of promote the elections in each one
dos distritos, tendo sido a sua escolha presidida
of.the districts AUX.GER AUX.PP the their selection guide.PP
por critérios que respeitam ao conhecimento directo das
by criteria that respect to.the knowledge direct of.the
zonas em causa.
zones in question
'Each member of Directive Committee will also be responsible of promoting the elections in each district. Their selection was guided

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by criteria regarding their direct knowledge of the zones in question.'

As discussed above, none of the aforementioned authors provide an explanation for the asymmetry between adjunct clauses on the left and on the right. For the case of compound infinitives in Dutch - which, I will contend, has a syntactic and semantic parallelism with the constructions under analysis -, Zwart (2017a,b) argues that the compound verb forms are part of the morphological paradigm and are inserted post-syntactically based on the temporal features present in the derivation. This analysis could be extended to the Portuguese non-anteriority CG in order to formalize the descriptions made by Leal (2001), Lobo (2006, 2013) and Cunha et al. (2008), among others. A possible version of the morphological paradigm in Portuguese is represented in Table 2. The CG would be associated to all cases of anteriority discourse relations (namely Retro-narration and Explanation; represented as [+ ANT]). The SG, on the other hand, would be used to express discourse relations that imply a non-anterior temporal ordering (see Section 2.2). In the case of situations located in the past that are linked to the situation described by main clause through a non-anteriority discourse relation, the paradigm would permit both the SG and the CG (see Table 2).

	Ordering of the two situations	
Tense	[- ANTERIOR]	[+ ANTERIOR]
FUTURE	SG	CG
PRESENT	SG	CG
PAST	SG/CG	CG

Table 2: Morphological paradigm of gerund clauses

The possible alternation between CG and SG would then arise as a result of optionality in the morphological paradigm. The occurrence restrictions would naturally follow from this analysis: (i) the non-anteriority CG can only occur with past verb tenses in the main clause, because logically if and only if the situation described by the main clause is located in the past can a posterior or overlapping situation expressed by the gerund also be located in the past (which seems to be a semantic requirement for the use of the non-anteriority CG), and (ii) the non-anteriority CG can only

occur to the right of the matrix clause, possibly due to pragmatic restrictions on the ordering of narrative sequences, which we also find in finite contexts (see (41a) and (41b)).

(41) a. *A   Ana   saiu de casa   e   foi   para o   aeroporto.*
      the Ana   left of home and went to   the airport
      'Ana left home and went to the airport.'

    b. **A Ana   foi   para o   aeroporto e   saiu de casa.*
      the Ana   went to   the airport   and left of home
      'Ana went to the airport and left home.'

However, this analysis presents several problems. First of all, it seems questionable why the verbal paradigm would provide two ways to convey the same meaning. It certainly seems uneconomical. Even though, in EP, there are also several cases where two forms express the same value (for example the simple and the compound form of the *pretérito mais-que-perfeito* 'past perfect', or the simple and periphrastic future), in these cases we usually observe, at least, a difference in register. In the case of the future and the past perfect, the synthetic forms are more common in formal or written language, where as the compound and periphrastic forms, respectively, are more commonly used in informal or oral contexts. In the case of the alternation between the simple and the compound gerund, on the other hand, no such difference in register can be verified; both forms are predominantly used in formal and/or written discourse.

There are, indeed, some cases where one meaning is expressed by more than one form, for example the two forms of the Spanish *imperfecto de subjuntivo*, which are generally considered to be synonymous[7]. The crucial difference between the substitutability of the two Spanish *imperfecto de subjuntivo* forms and the simple and compound gerund in Portuguese is that, in Spanish, the verb forms in question are highly specialized and not ambiguous in their interpretation. In any given context, either one of the two forms produces an unambiguous interpretation. In Portuguese, on the other hand, the CG can present another, and semantically opposite, interpretation (anteriority). Contrary to what happens with the Spanish *imperfecto de subjuntivo* forms, the use of the CG frequently produces ambiguous readings, as exemplified in (42). Therefore, the idea that the verb paradigm associates both the SG and the CG to [- ANT, + PAST] contradicts not only the economy principle, but also the univocality principle of

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[7]There is, however, a difference of use, based on sociolinguistic and pragmatic factors (see Horten 2017 for a detailed analysis).

language[8].

(42) *A   Ana   foi   ao   cinema, tendo   jantado (antes /*
     the Ana went to.the cinema AUX.GER dine.PP before /
     depois).
     after
     'Ana went to the cinema and had dinner (before / after).'

Second, the pragmatic restrictions on the ordering of narrative sequences, as exemplified in (41), only explain the impossibility of the posteriority CG to appear on the left of the matrix clause. As we see in the contrasts between (43a) and (43b), however, the overlapping CG is restricted to the right, whereas the overlapping SG can occur on either side of the main clause. Thus, we find a clear asymmetry between the CG and the SG, which remains unexplained if we were to pursue a purely morphological analysis of the non-anteriority CG.

(43) a. *A   Ana   saiu de casa, tendo   levado / levando   um*
         the Ana left of home AUX.GER take.PP / take.GER a
         chapéu-de-chuva   consigo.
         umbrella   with.her
         'Ana left home, taking an umbrella with her.'
     b. *Tendo   levado / levando   um chapéu-de-chuva consigo,*
         AUX.GER take.PP / take.GER a   umbrella   with.her
         a   Ana saiu de casa.
         the Ana left of home
         'Taking an umbrella with her, Ana left home.'

A third problem to this morphological analysis of the non-anteriority CG arises from scenarios such as (44). This case presents the following characteristics: (i) the situation described by the clause containing the CG (ev2) is located after the situation described by the clause to which it is

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[8]Following the same reasoning, and arguing against the hypothesis that the gerund morpheme itself expresses the interpropositional values, Móia and Viotti (2005: 718-719) have pointed out that "se os valores em causa fossem directamente marcados pelo morfema de gerúndio, estaríamos perante um caso – inédito e, no mínimo, bastante exótico – de homonímia antonímica" (Translation: if the values in question were directly expressed by gerund morpheme, we would have an unprecedented and at least very exotic case of antonimic homonymy) and argue that "o morfema do gerúndio é um marcador meramente sintáctico de conexão proposicional, isto é, um morfema semanticamente nulo" (Translation: the gerund morpheme is a mere syntactic marker to connect propositions, i.e. it is a semantically null morpheme).

adjoined (ev1), and (ii) the situation described by the clause containing the CG is located in the future (see (44b) for the temporal ordering). This means that the CG of (44a) does not fit into any one of the categories of the paradigm in table 2; it is neither [+ ANTERIOR], nor [PAST].

(44) a. A witch looks into the future and predicts the following:
      "Tomorrow Pedro will have a car accident and ...
      ...[daqui   a   um   mês,   no   tribunal, ele admitirá
      from here to   one month in the court   he admit.FUT
      *[ter   circulado em   excesso de   velocidade]$_{ev1}$, **[tendo***
      AUX.INF drive.PP in   excess of   speed   AUX.GER
      ***causado, por isso, o   acidente]$_{ev2}$]$_{ev3}$."*
      cause.PP for that the accident
      '...in a month, in court, he will admit that he drove too fast,
      causing the accident.'
      b. n < [ev1 < **ev2**] < ev3

Even though ev2 is posterior to ev1 (the situation described by the sentence to which the gerund clause is adjoined), one might argue that - since it is also anterior to ev3 (the situation described by the finite main clause) -, that the CG arises as a result of this anteriority between ev2 and ev3. This is essentially true, but does not constitute an argument in favor of a morphological analysis, quite on the contrary. If we take a look at discourse fragments, such as the ones in (45), we can clearly understand that ev4 is posterior to ev1, but this information is inferred from the discourse sequence (ev1 < ev2 < ev3 < ev4), and more generally from our world knowledge, but not from any syntactic posteriority features directly linking ev1 to ev4.

(45) [Yesterday I went to school]$_{ev1}$, afterwards [I had lunch with a friend]$_{ev2}$. [In the afternoon I baked a cake for my brother's birthday]$_{ev3}$, and [in the evening I finally had time to read a book]$_{ev4}$.

It would be an unbearable burden for our cognitive system to require every situation to be linked to any other in the discourse context through syntactic features. It is far more reasonable to assume that temporal features are binary and can only directly link two situations, and that a given set of temporal features can only be present once on a head. Stowell (2007) argues that tense is expressed through a functional head that selects two time-denoting predicates as arguments. This functional head contains information regarding the temporal ordering between the two arguments.

The situation to be located in time is the complement of this head, whereas the temporal reference point is located in the specifier position, and c-commands the complement. Assuming this idea, in examples such as (44), the situation described by the highest matrix clause (the admission of guilt) would not be available as provider of a temporal reference point for locating the situation described by the gerund clause (causing the accident), due to syntactic locality. The infinitive clause (describing the situation of driving too fast) would act as an intervener between the T head of the gerund clause and the highest matrix clause (describing the admission of guilt), preventing it from establishing a temporal reference point for the CG.

2.6 Summary

In this chapter, I have discussed the temporal and rhetoric relations that sentences with the CG can express with respect to the main clause. A clear asymmetry between the anteriority and the non-anteriority compound gerund can be observed with regard to the following aspects (see Table 3 for a summary).

(i) The anteriority CG can occur both to the left and to the right of the main clause, whereas the non-anteriority CG can only occur to the right.

(ii) The anteriority CG can occur with any matrix verb tense. The non-anteriority CG, on the other hand, presents certain co-occurrence restrictions with regard to the main clause, namely it can only occur with matrix verb forms that locate the described situation in the past, unless in specific prospective scenarios (see example (44) of the witch), where the gerund clause can be adjoined to an embedded sentence expressing anteriority to the situation described by its sub subordinating clause (in which case, the past tense restrictions mentioned above may not apply).

(iii) The anteriority CG cannot alternate with the SG without affecting the meaning, whereas the non-anteriority CG can.

Furthermore, I have discussed previous accounts of the non-anteriority CG and their limitations. Most of these accounts implicitly assume a morphological analysis, based on the idea that the sentence-final CG in Portuguese can express anteriority both to the situation described by the main clause and to the utterance time. I have shown, however, that this basic assumption is empirically false. Furthermore, theoretical problems arise with regard to the codification of tense, if we assume a purely morpholo-

gical analysis.

The goal of this study is, therefore, to further investigate the Portuguese CG and to propose an analysis that explains the described asymmetries and that solves the problems of a purely morphological analysis described in the previous section.

	Anteriority compound gerund	Non-anteriority compound gerund
Mandatory sentence-final position	no	yes
Co-occurrence restrictions with the matrix verb form	no	yes
Alternation with the simple gerund	no	yes

Table 3: Asymmetries between the anteriority and non-anteriority CG

Chapter 3

Related phenomenon: Parasitic participles in Germanic

The parasitic participles are a phenomenon described for several Germanic languages. They can be defined as "[participles] selected by verbs (e.g., modals), which normally can only combine with infinitival complements" (Wurmbrand 2012: 155). Despite variation among the different Germanic languages, three common properties can be described: "i) the parasitic form is optional; ParPars always alternate with infinitives; ii) ParPars are only possible when there is an appropriate licensing head — an overt or covert AUX (as German will show not necessarily another [participle]); iii) the parasitic morphology is semantically vacuous; ParPars are not interpreted as a perfectives, but rather the meaning is identical to the meaning of the infinitival construction" (ibid.). In this chapter, I will give a brief overview of the different types of ParPars and their respective properties. I will then discuss Wurmbrand's analysis of this phenomenon. The chapter concludes with a summary of the similarities and differences between the parasitic participles and non-anteriorty CG.

3.1 A brief typology of parasitic participles

There are significant differences among Germanic languages with regard to the restrictions that constrain the occurence of the ParPars. These differences are generally related to the word order and morphological realization of other verb forms in the clause. Wurmbrand (2012) proposes two types of parasitic participles.

3.1.1 Type 1 - Downward parasitic participles

Norwegian and Frisian display ParPars of type 1, as exemplified in (46) and (47) respectively (the ParPar is underlined).

(46) a. *Jeg hadde villet   lest   / lese   boka.*
       I   AUX   want.PP read.PP   read.INF book.DEF
       'I would have liked to read the book.'
   b. hadde < villet < lest

<div align="right">(Norwegian, Wiklund 2001: 201)</div>

(47) a. *Hy soe   it dien / dwaan wollen   ha.*
       he   would it do.PP / do.INF want.PP AUX.INF
       'He would have liked to do it.'
   b. soe < ha < wollen < dien

<div align="right">(Frisian, Dikken and Hoekstra 1997: 1058)</div>

In both languages, the ParPar can alternate with the infinitive. The common property of type 1 is that the parasitic form is always the lowest verb in the structure, as shown in (46b) and (47b). In Norwegian this corresponds linearly to the third verb, whereas in Frisian - a head-final V2 language - this corresponds to the second verb in the linear order.

3.1.2 Type 2 - parasitic participles with movement

Upward parasitic participles
Frisian also displays another type of parasitic participles. This type is characterized by the word order 1 - 4 - 3 - 2, with the verb 2 being the parasitic form, as shown in (48). Type 2 is also found in the Stellingwerf dialect of Dutch (Zwart 1995).

(48) *Hy soe   it dien ha   wollen   / wolle.*
     he   would it do.PP AUX.INF want.PP   want.INF
     'He would like to have done it.'

(49) soe < wollen < ha < dien

<div align="right">(Frisian, Dikken and Hoekstra 1997: 1058)</div>

German *Skandalkonstruktion*

German also allows for ParPars of type 2, as illustrated in (50). However, several occurrence restrictions, as compared to Frisian, can be observed: (i) in German the ParPar can only occur without a lexically realized subject and (ii) they can only appear if the verb order is 3 - 1 - 2 (Wurmbrand 2012: 159).

(50) ... *ohne   es gemacht / machen   haben   zu können.*
        without it make.PP   make.INF AUX.INF to can.IPP

     '... without having been able to do it.'

(51) haben < können < gemacht

3.2   Wurmbrand's proposal (2012)

In order to explain ParPar constructions, as well as to account for the variation observed among the different Germanic languages, Wurmbrand proposes a syntactical analysis of this phenomenon. She argues that the ParPars appear due to a requirement to value uninterpretable and unvalued temporal features on V (2012: 156). This valuation occurs upward, in an operation the author calls 'Reverse Agree'. In Reverse Agree, the Goal c-commands the Probe, and Agree is triggered by the need to value unvalued features on the Probe (see Section 4.2 for a detailed discussion of the different versions of Agree).

Wurmbrand argues that Germanic modal verbs can combine with two types of complements, depending on the kind of construction (2012: 156-7). In restructuring contexts, the modal combines directly with a verbal projection (vP or VP), whereas in non-restructuring contexts, the modal combines with an aspectual infinitive head (INF)[9]. In both cases, the head corresponding to the possible ParPar is merged with uninterpretable and unvalued temporal features that need to be valued before Spell-out. This valuation takes place in an upward fashion, where the Goal c-commands the Probe, and is triggered by the need for feature valuation. In this case, the Probe is a verbal head with unvalued temporal features, and the Goal is the closest head with valued temporal features. In non-restructuring contexts the closest Goal is the aspectual infinitive head, whose features are valued for [iT: inf]. Therefore, when V establishes an Upward Agree relation with this head, the infinitive is licensed (see a. in Figure 1; the

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[9]The author herself states that she remains "agnostic about the exact label of that head" (Wurmbrand 2012: 156).

features valued in Agree are underlined). However, if the construction is one of restructuring, the aspectual head INF would be missing, and therefore the modal head combines directly with the verbal projection. In this case, due to the absence of the infinitival head, the closest Goal with valued temporal features is the auxiliary head (see b. in Figure 1). In ParPar constructions, the auxiliary head therefore values the unvalued temporal features both of the modal head and the lowest verbal head, which licenses the occurrence of two participle forms.
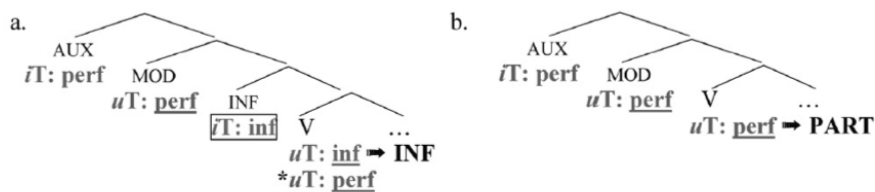
Figure 1: Feature valuation in restructuring and non-restructuring contexts (Wurmbrand 2012: 156)

In type 2 ParPars, the parasitic form is merged above the licensing auxiliary head. These constructions involve movement of verbal constituents, and require therefore a different analysis. For clarity of exposition, and because type 2 constructions are irrelevant for our proposal on the non-anteriority CG in Portuguese, we will not present the analysis Wurmbrand proposes for these constructions.

3.3 Parasitic participles and the non-anteriority CG: Similarities and differences

As described in Section 2.4, the non-anteriority CG presents several properties that clearly distinguish it from the anteriority CG, i.e. (i) it can only occur on the right of the matrix clause, (ii) it can only occur with matrix T containing some kind of [+ ANT] feature, and (iii) it can alternate freely and without semantic effects with the SG. If we compare these properties with those described by Wurmbrand (2012) for the ParPars in Germanic languages, some similarities can be observed.

First of all, in both cases the participle form does not transmit its typical semantic value, having instead an interpretation similar to the unmarked

form. As for the CG, the value usually transmitted by this form is a temporal relation of anteriority between the situation described by the two clauses, whereas in the case of ParPar the typical value is perfectivity.

Second, and closely related to the first characteristic, both the non anteriority CG and the ParPars can alternate freely and without semantic effects with the SG and with the infinitive, respectively.

Third, we observe certain restrictions concerning the heads that can license the occurrence of these two phenomena. The non-anteriority CG can only appear if the matrix T (or the embedded T of the clause to which the gerund clause is adjoined, see the discussion of example (44)) contains a [+ ANT] feature. The ParPars, in turn, can only appear c-commanded by auxiliary heads, which Wurmbrand analyzes as containing a [iT: PERF] feature.

Forth, the previous aspect is related to the relative position that both phenomena can occupy in the clause. Even though ParPars exist both on the left and on the right of the auxiliary, this possibility is restricted by the head directionality parameter. In Norwegian, for example, the ParPar can only occur on the right, as seen in example (46). However, in head final languages, such as Frisian, the ParPar occurs on the left of the head that licenses it, as exemplified in (52). The relevant syntactic criterion seems to be c-command by an auxiliary head (Wurmbrand 2012: 155). The non-anteriority CG, on the other hand, can only occur on the right side (in section 4.1 we will discuss how this restriction might also be related to the c-command condition).

(52) *Hy soe   it dien   wollen   ha.*
      he   would it do.PP want.PP AUX.INF
      'He would have wanted to do it.'

      (Frisian; Dikken and Hoekstra 1997: 1058)

Finally, note that the non-anteriority CG and the ParPars serve different functions in the clause. The gerund clause occupies the position of an adjunct, whereas the ParPars appear as the complement in a verbal complex.

Despite the differences between these two phenomena, concerning their function in the clause and the temporal/aspectual features involved, we also observe some parallels regarding their untypical interpretation, their substitutability by an unmarked form and the restrictions on their position

in the functional structure of the clause, namely only c-commanded by certain heads[10] (see Table 4 for a summary). In the following chapter, I will propose a syntactical analysis of the non-anteriority CG that is inspired in Wurmbrand's analysis of the ParPars.

	Non-anteriority CG	**ParPars**
Position with regard to the matrix	Only on the right	Both on the left and right (only under c-command)
Restrictions on the c-commanding head	[+ ANT]	[+ PERF]
Interpretation	Identical to SG	Identical to infinitive
Alternation without semantic effects	Yes, with SG	Yes, with infinitive
Function in the clause	Adjunct	Complement

Table 4: Differences and similarities between the non-anteriority CG and parasitic participles

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[10]Note that, in the case of the ParPars, the position in linear order (on the left or on the right side) may vary, not only due to the head directionality parameter, but also depending on whether the ParPar occurs in a root sentence (V2) or in an embedded clause.

Chapter 4

A syntactical analysis of the non-anteriority compound gerund

4.1 The non-anteriority compound gerund as a result of feature valuation

In Section 2.5, the limitations of previous accounts of the non-anteriority CG have been discussed. The main problem is that they remain largely descriptive and are not able to explain the asymmetry between sentence-final and sentence-initial adjunct clauses. Furthermore, they do not capture the full range of possible occurrences of the CG, i.e. in complex sentences expressing prospective scenarios, the compound form can yield temporal interpretations that are neither anterior to the utterance time, nor anterior to the situation described by clause to which it is adjoined (see example (44) of the prediction uttered by a witch). In this section, I will, therefore, propose a syntactical analysis of the non-anteriority CG that is inspired in Wurmbrand's analysis of the ParPars in Germanic languages.

The basic idea is that the non-anteriority CG appears due to the underspecification of the temporal features on the gerund T head and subsequent valuation of these features against the main clause T head in Upward Agree. However, before presenting this analysis with more detail, the premises necessary to sustain this hypothesis will be laid out. First of all, and following Lobo (2006: 16-17), I assume that Merge (without Move) can build structures with adjunction both on the right and on the left side of an XP. Second, I will assume that there are different adjunction positions available in the structure of a sentence. Lobo (ibid.) distinguishes between two positions: a high or peripheral one (adjunction to TP or CP) and a low or integrated one (adjunction to VP or vP). In order to explain

the temporal dependency of integrated gerund clauses (for example, manner clauses), the author argues that "[o] T do gerúndio é um T defectivo, não totalmente especificado, e que o núcleo C da gerundiva contém traços temporais fortes não interpretáveis que terão de ser verificados através da subida de V-T ou através da lexicalização de C[11]". In Lobo's analysis, the temporal dependency is a result of a head-to-head Agreement between the main clause T and the gerund T (ibid.). I will assume with Lobo (2006) the defectivity of the gerund T head due to underspecification of the temporal features and the obligatory raising of V-T to C that follows from it (except when C is lexically realized). Given the fact that C is "[the] domain, where the existing structure is linked to the larger structure" (Ritter and Wiltschko 2014: 1334), I will assume that the strong temporal features in C mentioned by Lobo codify the discourse relation which links the situation described by the gerund clause to the situation described by the main clause. Third, I will use Rooryck's theory of variable feature underspecification (1994). According to this theory, a feature F can be valued as [+ F] or [- F], but it can also be underspecified. This underspecification can either be variable (represented as [? F]), in which case the feature needs to be valued during the derivation, or it can be invariable (represented as [0 F]), in which case the feature cannot be valued. Invariable underspecfied features [0 F] possess a neutral value, and therefore they cannot take part in any syntactic operations (for an application of this feature theory in Portuguese, see for example Martins 2000). Finally, following authors such as Wurmbrand (2012) or Zeijlstra (2012), I will also assume that Agree takes place in an upward direction, i.e. the Goal c-commands the Probe. Since this is a very complex and polemic topic, which is, however, crucial to my analysis, some versions of Agree proposed in the literature will be discussed in greater detail in the following section. For now, I will simply assume that the Probe contains underspecified features which need to be valued and that it therefore probes up until it finds a suitable Goal which c-commands it.

Based on these premises, I will now describe in greater detail the proposed syntactical analysis. In the case of the conventional **anteriority CG**, the gerund C head is merged with a [+ ANT] feature that codifies the temporal ordering linked to the discourse relation (Retro-narration or Explication) between the situation described by the gerund clause and the situation described by the main clause. When the V-T complex raises to C,

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[11]Translation: [the] gerund T head is a defective and not completely specified T, and the gerund C head contains strong uninterpretable temporal features, which need to be checked through the raising of V-T or through the lexical realization of C.

the gerund T head values its variable underspecified temporal features against the gerund C head for [+ ANT]. This valuation then licenses the occurrence of the compound form. A simplified version of the derivation is represented in (53). Crucially, all necessary features required for the licensing of the compound form are located within the gerund clause CP. The exact adjunction position is therefore irrelevant, and for the sake of simplicity marked as XP.

(53) a.
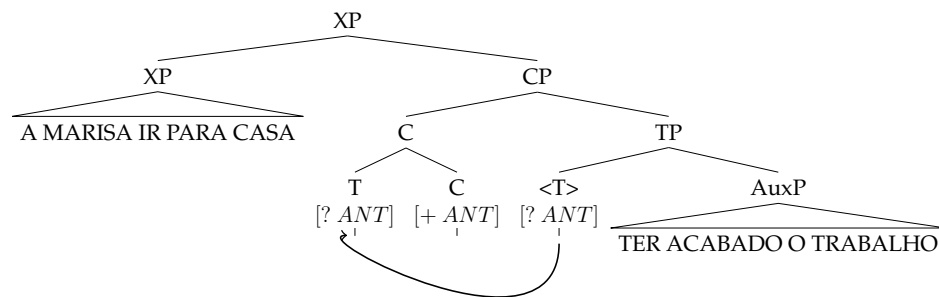
   b. *A   Marisa foi   para casa, tendo   acabado o*
     the Marisa went to   home AUX.GER finish.PP the
     trabalho.
     work
     'Marisa went home, (after) having finished her work.'

In the case of the **non-anteriority CG**, on the other hand, the features present within the gerund CP cannot explain the occurrence of the compound form. Since the situation described by the gerund clause is not anterior to the one described by the main clause (it can be posterior, overlapping or the temporal ordering can remain unspecified), the gerund C head is not valued for [+ ANT]. I will argue, however, that in the case of the non-anteriority CG, the relevant feature is not marked as [- ANT], but as [0 ANT]. As described above, the invariable underspecification represented as [0] means that the feature has a neutral value, which renders it invisible to any syntactic operations, such as Agree. In these cases, when the gerund V-T complex raises to C, it finds no suitable Goal to value its underspecified temporal features. However, if (i) the matrix T head c-commands the gerund C head (which contains the V-T complex) and (ii) the matrix T is valued as [+ ANT], then the gerund T head can probe higher up the structure and values its temporal features for [+ ANT] against the main clause T head in Upward Agree. In this case, the compound form does

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not occur due to an anteriority feature in C (which would codify the temporal ordering between the two situations), but rather due to the necessity of feature valuation and a defective gerund C head. This valuation has to take place against the closest active Goal with compatible features; in this case the matrix T head. The derivation of a posteriority CG is represented schematically in (54). Note that in this case, the adjunction position is not irrelevant due to the c-command condition[12].

(54) a.
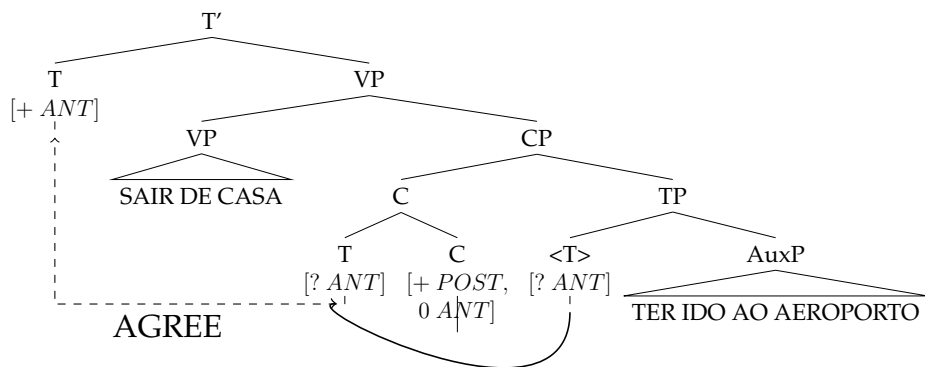
b. *A   Patrícia   saiu   de   casa,   tendo   ido   (diretamente)*
   the   Patrícia   left   of   home   AUX.GER   go.PP   directly
   ao   aeroporto.
   to.the   airport
   'Patrícia left home and went directly to the airport.'

From condition (i), it follows that the non-anteriority CG should only be possible in sentence-final gerund clauses, because only in these configuration can there be c-command between the two T heads (see the discussion in Section 4.3). This explains why in sentence-initial gerund clauses, the anteriority reading is the only one available. From condition (ii), it follows that the non-anteriority CG should only be possible if the main clause T head is valued for [+ ANT]. If the main clause T head is valued for [- ANT] (for example, a present or future verb tense) the gerund T head values its temporal features for [- ANT], which turns impossible the occurrence of the compound form.

Now the question arises of how this analysis can account for the free alternation between the simple and the compound gerund in non-anteriority

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[12]For the sake of simplicity, the gerund CP appears adjoined to the main clause VP. However, further research is required to determine the exact adjunction position (see also Lobo 2006).

contexts. Intuitively, one might expect that, in the case of discourse relations that are linked to a non-anterior temporal ordering, the gerund C head would contain a [- ANT] feature. When the gerund V-T complex raises to C, this valued [- ANT] feature would constitute a suitable goal for the valuation of the underspecified features in T, and only the occurrence of the SG would be licensed. If we take the example of the posteriority CG, the expected set of temporal features would be C [+ POST, - ANT]. However, there is no necessary link or implication between the posteriority and the anteriority features[13]. Therefore, a posteriority discourse relation might well be expressed through a C [+ POST, 0 ANT]. In favor of this assumption (and admitting that there might be other arguments), I will briefly comment on the *pretérito perfeito simples* (present tense of the auxiliary + past participle) in Portuguese, as opposed to other Romance languages. In Portuguese, this verb tense is used to express situations whose beginning is located in the past, but that can continue until the present or even the future (in which case eventive situations obtain an iterative value, see Peres 1993: 26). This is illustrated in (55a), where the *pretérito perfeito simples* expresses a situation in the past, but contains an implicature that the situation will be repeated in the future. It is conceivable that the set of features, in this case on the T head, is [+ ANT, 0 POST]. However, in other Romance languages, such as Spanish, French or Italian, for example, the equivalent of the *pretérito perfeito simples* expresses a situation located in the past, without the possibility of this situation lasting to the present or the future. This is exemplified in (55b-d). In these languages, the relevant features on T would, therefore, be [+ ANT, - POST].

(55) a. *O   Nuno   tem   comido   maçãs.*
         the Nuno has   eaten   apples
         'Nuno has eaten apples.'
         Implicature: Nuno will continue to eat apples. (PT)
      b. *Nuno   ha   comido   manzanas.*
         Nuno has   eaten   apples
         'Nuno has eaten apples.'
         No implicature for the future. (ES)

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[13] Consider for example temporal inclusion, where it is conceivable that the C head of the clause describing the included situation contains the feature combination [- ANT, - POST] or the discourse relation Background, where it is conceivable that the C head of the clause describing the situation that serves as background contains the feature combination [+ ANT, + POST]. Even though in these cases other features, related to e.g. meronymy, or pragmatic factors might play a role.

c. *Nuno a mangé des pommes.*
Nuno has eaten of.the apples
'Nuno has eaten apples.'
No implicature for the future. (FR)

d. *Nuno há mangiato delle mele.*
Nuno has eaten of.the apples
'Nuno has eaten apples.'
No implicature for the future. (IT)

Following the basic minimalist assumption that all syntactic variation can be reduced to differences in features on functional items (Boeckx 2006: 80-81), I will argue that the free alternation between the simple and compound form follows from the existence of two versions of the relevant gerund C heads in the Portuguese functional inventory. Returning to the example of a posteriority discourse relation, there would exist a fully specified head C [+ POST,- ANT], which gives rise to the simple form (V-T raises to C and values its features for [- ANT]), and then there would exist a more "defective" version of this head C [+ POST, 0 ANT] which gives rise to the compound form.

4.2 The directionality of Agree

The proposed syntactic analysis depends crucially on the notion of Upward Agree. In this section, I will therefore discuss some of the different versions of Agree that have been suggested in the literature, with regard to the directionality of this operation, as well as its trigger. The section is based on the work of Zeijlstra (2012) and his criticism of the classical, downward version of Agree. Note, however, that it is beyond the scope of this dissertation to discuss all aspects and implications of the different versions of Agree. Therefore, in the four more recent proposals of Agree that were selected for discussion in this section, the focus will lay on the aspects that are relevant to this analysis, namely the directionality (and to a lesser extent, the trigger). Due to the predominance of the Downward Agree and the fact that the three downward versions discussed here (Chomsky 2000, 2001; Pesetsky and Torrego 2007; Bošković 2007) are relatively well-known versions of Agree, I will only briefly outline each proposal. The idea of Upward Agree, on the other hand, is more recent and still not widely known[14], therefore the two selected proposals (Wurmbrand 2012;

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[14]Note, however, that already in the Government and Binding theory, licensing of an XP implied that it would look up the tree to search for a licensor; licensing would then be

Zeijlstra 2012) will be discussed in greater detail.

4.2.1 The standard version of Agree (Chomsky 2000, 2001) and its limitations

Chomsky (2000, 2001) laid out the "standard version of Agree". In his proposal, Agree is an operation that takes place between a Probe and a Goal. The former is characterized by containing an unvalued and uninterpretable feature [uF: _], whereas the latter contains the same feature, however valued and interpretable [iF: val]. In Chomsky's work (2000, 2001), crucially, the interpretability and the valuedness of features are linked, in the sense that uninterpretable features are always unvalued, and interpretable features are always valued. Agree is triggered by the need to eliminate all uninterpretable features before Spell-Out. Furthermore, the Goal needs to contain a set of unvalued uninterpretable features, in order to be visible to syntax. This is also known as the Activation Condition. Agree always takes place between the Probe and the closest active Goal with matching features.

Chomsky's standard version of Agree is often summarized as shown in (56).

(56) α can agree with β iff:

      a. α carries at least one unvalued and uninterpretable feature and β carries a matching interpretable and valued feature.
      b. α c-commands β.
      c. β is the closest Goal to α.
      d. β bears an unvalued uninterpretable feature.

The minimal elements necessary to obtain the correct configuration for Agree, as proposed in Chomsky (2000, 2001), are shown in (57).

However, there is a series of problems with this standard version of Agree. We will now review some of the issues raised in the literature (see for example Bošković 2007; Pesetsky and Torrego 2007; Zeijlstra 2012).

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possible with movement or simply with government (H-government.)

(57)

a.   [α   [β   ]]
                [uF: __]   [iF: *val*]
                          [uK: __]

b. Agree   ⇒ [α   [β   ]]
                [u̶F̶:̶ ̶v̶a̶l̶]   [iF: *val*]
                [u̶K̶:̶ ̶v̶a̶l̶]

a) Reverse Agree

It follows from the activation condition that the Goal itself must carry some unvalued uninterpretable feature, which in turn is valued against the Probe. This effect has been called Reverse Agree[15] and seems to be some sort of collateral byproduct of the primary Agree operation.

This means that even in the standard, i.e. downward, version of Agree we find cases where an unvalued uninterpretable feature is checked against a higher instance of the same feature. Zeijlstra (2012: 497) points out that "[n]ot only is this notion of reverse Agree a spurious one, as nothing principled within the Agree framework motivates it, but, more importantly, it suggests that some instances of Agree are dependent on other instances of Agree, indicating unmotivated connections between particular syntactic categories." The same problem has been mentioned by Pesetsky and Torrego (2007), who propose a possible solution (see the following section for their account). Furthermore, if Agree is bidirectional, since not only the Probe but also the Goal have unvalued uninterpretable features that need to be checked, the question arises why the downward relation (unvalued uninterpretable feature on the Probe being checked) should be the primary one and the upward secondary. Conceptually nothing impedes the upward relation from being primary (something similar has been argued for by Bjorkman and Zeijlstra to appear).

As a matter of fact, the Bantu languages seem to provide further evidence that an instance of Upward Agree may appear without depending on a primary downward Agree relation. In sentences such as (58) the verb agrees with a non-subject constituent which is base-merged above

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[15]Zeijlstra's "Reverse Agree" is not to be confused by the "Reverse Agree" used by Wurmbrand (2012), discussed in Section 3.2. See also footnote 17.

the verb. The nominal constituent receives case independently from the matrix T (in the given example, from a locative marker). Therefore, in this construction, there is no case checking requirement for the DP, hence no downward Agree that could cause the upward verb agreement as its byproduct.

(58) *Omo-mulongo   mw-a-hik-a   mukali.*
      LOC.18-village.3   18S-T-arrive-FV   woman.1
      'At the village arrived a woman.'

<div align="right">(Kinande, Baker 2008: 158)</div>

b) Multiple Agree

In its standard version, Agree is assumed to take place between the Probe and the highest matching Goal. This Goal is then rendered inactive and acts as an intervener between the Probe and possible lower Goals (this is called the Defective Intervention Constraint). Furthermore, Agree is driven by the need to check and eliminate uninterpretable features on the Probe. For these reasons, Multiple Agree should not only be impossible but also unnecessary.

However, instances of Multiple Agree have been argued to exist, for example in Japanese. This is exemplified in (59) with an instance of multiple nominative licensing (see Hiraiwa 2001). Since Japanese infinitives cannot license nominative case, all three instances of nominative must be licensed by the matrix T. This raises the question why the highest nominative constituent does not intervene in any additional Agree relations between the matrix T and the lower Goals. Furthermore, the need for Multiple Agree seems to lie within the Goals (which require case licensing) and not in the Probe (which should have its features checked and eliminated after the first instance of Agree).

(59) *John-**ga**   [yosouijouni   nihonjin-**ga**   eigo-**ga***
      John.NOM   than.expected   the.Japanese.NOM   English.NOM
      hidoku]   kanji-ta.
      bad.INF   thought
      'It seemed to John that the Japanese are worse at speaking English than he had expected.'

<div align="right">(Japanese, Hiraiwa 2001: 76)</div>

c) Concord phenomena

Zeijlstra (2012) discusses two concord phenomena, i.e. negative concord and sequence of tenses. The author defines the former as "the phenomenon where multiple negative elements, i.e. elements that in isolation may give rise to a semantic negation, together yield one single semantic negation" (ibid.: 500). This is illustrated in (60), where we find three negative elements (*não* 'not', *nada* 'nothing', *ninguém* 'nobody') that conjointly express one semantic negation.

(60) *Ele não disse nada   a   ninguém.*
      he   not said nothing to nobody
      'He didn't say anything to anybody.'
      ≠ 'He did not say nothing to nobody.'

Zeijlstra argues that, independently of the analysis one adopts (insertion of *não* 'no' in Neg or presence of an abstract negative operator), this phenomenon poses serious problems to the standard version of Agree. Since the negative words are not interpreted as semantically negative elements, at least some of those elements must be considered to contain an uninterpretable negative feature. In the standard version of Agree the operation is triggered by the need to check uninterpretable features. Therefore, if we assume the lower negative words to contain uninterpretable negative features that require checking against a head containing an interpretable negative feature (either a negative operator or the Neg head filled by *não* 'no', depending on the analysis one adopts, see Zeijlstra 2012: 501), the resulting configuration is always one that is problematic for the standard version of Agree, both with regards to the directionality of the operation, and the above discussed Defective Intervention Constraint.

The second Concord phenomenon that Zeijlstra discusses, and that shows more similarities with the non-anteriority CG, is the so-called Sequence of Tenses. In languages such as English, in subordinate clauses, the tense is dependent on the tense of the matrix clause, i.e. in an embedded clauses we do not find absolute tense. In sentences like (61a) one interpretation is that Mary is happy at the moment when John utters the sentence (and might still be happy at the utterance time of the main clause). The past tense morphology of 'was' therefore does not introduce an absolute past interpretation and seems to be dependent on the matrix tense. Following authors such as Stechow (2003, 2005) and Pesetsky and Torrego (2007), Zeijlstra argues that the temporal features on both the matrix and the embedded verb are uninterpretable and therefore do not introduce semantic past tense, and that the abstract head T contains the interpretable

past feature responsible for the past interpretation of the sentence. The resulting configuration is shown in (61b).

(61) a. John said Mary was happy.
      b. [John T$_{[iPAST]}$ [said$_{[uPAST]}$ [Mary was$_{[uPAST]}$ happy]]]

In English, the embedded verb must obligatorily appear in a past-shifted tense if the main verb appears in the past. However, in Romance languages this is not the case, as shown in (62) for Portuguese. We can find both the past tense and the present tense on the embedded verb, with both options being able to yield the non-past interpretation.

(62) *A   Mafalda disse que   o   Rui estava / está doente.*
      the Mafalda said   that the Rui was   is   sick
      'Mafalda said that Rui was sick.'

d) Triggering of intermediate steps in successive cyclic movement

Another issue the standard version of Agree faces is the so-called look-ahead problem. If we assume derivation by phases and that constituents moving out of their phase must move to the phase edge first, then the question arises what triggers this intermediate step in successive cyclic movement.

In sentences such as (63) the wh-constituent first moves out of his original complement position to the edge of the embedded CP, before it raises to its final position in the Specifier of the matrix CP, as represented in (63b). It is usually assumed that the wh-element is attracted by some feature present on the matrix C head. However, in a derivation model by phases, the matrix C head is not yet merged when the wh-element moves to the phase edge.

(63) a. What did you think that Sarah wants?
      b. [$_{CP}$ What$_i$ did you think [$_{CP}$ t$_i$ that Sarah wants t$_i$]]

e) The EPP feature

As a concluding remark, in the standard version of Agree, the EPP (Extended Projection Principle) feature is responsible for the movement of constituents. Initially this feature was proposed to ensure that every XP has its specifier position filled. The EPP feature was introduced mainly in order to justify the movement of the subject out of its initial position to the

specifier position of TP. However, the theoretical framework provides no principled motivation or explication for the existence of this feature and its nature, as noted by several authors (see for example Epstein and Seely 2002; Bošković 2007; Zeijlstra 2012). As we will see in the next sections, there have been several proposals arguing that there is, in fact, no such thing as an EPP feature.

4.2.2 More recent proposals of Downward Agree

Pesetsky and Torrego (2007)

Pesetsky and Torrego (2007) further develop the mechanics of Agree and solve some of the problems discussed above. One important innovation in their version of Agree is the independence of interpretability and valuedness. Therefore, not only the combinations [*u*F:_] and [*i*F: val] are possible combinations, but also [*u*F: val] and [*i*F:_]. Furthermore, in Pesetsky and Torrego's work it is not the need to eliminate uninterpretable features that triggers Agree, but rather the need to value unvalued features.

In order to solve the problem of Reverse Agree (and Multiple Agree), the authors adopt an analysis of feature sharing, where the highest Probe searches down in its c-command domain until it finds a Goal with matching features. If the features of this Goal are also unvalued, they form a chain which probes further down the structure until it finds a Goal with valued features. Pesetsky and Torrego's version of Agree is represented in (64). This feature sharing hypothesis does, however, not explain cases of Multiple Agree, where the highest goal is already lexically valued (see Zeijlstra 2012: 509).

(64) Agree (Feature sharing version)

    a. An unvalued feature F (a probe) on a head H at syntactic location α (F$_\alpha$)scans its c-command domain for another instance of F (a goal) at location β (F$_\beta$) with which to agree.

    b. Replace F$_\alpha$ with F$_\beta$, so that the same feature is present in both locations.

                        (Pesetsky and Torrego 2007: 268)

Bošković (2007)

Bošković (2007) also assumes the independence of the interpretability and the valuedness property of a given feature. His work focuses on the look-ahead problem and the lack of theoretical motivation of the EPP feature,

and he aims to provide a version of Agree that solves these two problems. Following Chomsky (2000, 2001), the author assumes that the need to check and eliminate uninterpretable features is the trigger of Agree. Bošković argues that Agree can only take place unidirectionally, namely downward. However, he suggests that an uninterpretable feature on the Goal leads to movement of this element, in order to establish the correct configuration for downward Agree (Bošković 2007: 591). His proposal is summarized in (65).

(65) Agree and Move

    a. In a configuration X ... Y, where X asymmetrically c-commands Y, and X and Y are involved in feature checking, an uninterpretable feature on Y will always result in the movement of Y to SpecXP.

    b. In a configuration X ... Y, where X asymmetrically c-commands Y, and X and Y are involved in feature checking, an uninterpretable feature on X will always result in pure Agree without movement.

(Bošković 2007: 591)

This version of Agree solves very elegantly two of the problems of the standard version of Agree. First of all, it turns the EPP unnecessary, because the uninterpretable feature on the lower constituent motivates its movement to the specifier position of a head with matching interpretable features. Second, this also solves the look-ahead problem in successive cyclic movement. If uninterpretable features function as a trigger for movement, the wh-element moves to the highest available position in each phase in order to be verified, and then moves up until the matrix clause where it finds a suitable goal.

Bošković continues to call the head containing uninterpretable features (and therefore moves) Goal. However, one might argue that in the cases of Agree with movement the so-called "Goal" behaves more like a Probe, similar to the proposals of Upward Agree discussed in the following subsection.

4.2.3 Upward Agree

Wurmbrand (2012)

Wurmbrand's proposal of Agree (2012) has already been briefly discussed in Section 3.2. She follows the more recent proposals of Downward Agree

(Pesetsky and Torrego 2007; Bošković 2007) in assuming that the interpretability and the valuedness of a feature are independent properties (Wurmbrand 2012: 154). The author also follows Pesetsky and Torrego (2007) in assuming that the need to value unvalued features is the trigger of Agree, due to the fact that "unvalued features cannot pass the interfaces", and therefore a feature [F: _] "must undergo Agree with the closest valued feature" (Wurmbrand 2012: 154). However, the crucial difference between Wurmbrand's proposal and previous versions of Agree is the directionality of the operation.

Wurmbrand's work focuses on the functional clause structure and on verbal heads[16], therefore this will be the focus of the discussion here. The author argues that all functional clause heads contain interpretable temporal features (that are typically, but not always, valued), and that all verbal heads contain unterinterpretable features (that are typically, but not always, unvalued) (Wurmbrand 2012: 154). Given the fact that the functional heads in the clause c-command the verbal heads, this usually locates the potential Goals above the Probes. Wurmbrand calls her version of Agree, therefore, "Reverse Agree[17]".

In Wurmbrand's words; "[Upward Agree] is thus essentially a syntactic mechanism to implement morphological selection" (ibid.: 155). The author argues that there are, however, two crucial differences between morphological selection and Upward Agree, which are crucial to the analysis of parasitic participles (ibid.):

> First, if, for some reason, a head (X) which semantically selects a verb (Y) is not specified for an iT-feature, an element higher than X can value Y, and Y will occur with the morphology corresponding to the higher verb rather than the selecting verb. Second, movement, which changes the syntactic Agree configuration (but not the semantic selectional properties) can affect valuation, and a verb can surface in a morphological form different from the form predicted by selection.

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[16]Further research will show if her proposal is compatible with the Agree operations that take place within a DP, for example.

[17] As mentioned above, Wurmbrand's "Reverse Agree" is not to be confused by the "Reverse Agree" used by Zeijlstra (2012), discussed in Section 4.2.1. Zeijlstra uses this term to describe the byproduct of the standard version of Agree, where the Goal also contains some uninterpretable unvalued features that it values against a matching counterpart on the Probe. Wurmbrand, on the other hand, uses this term to designate simple Upward Agree, without any Downward counterpart involved. In order to avoid terminological confusion, we will call Wurmbrand Upward Agree, abandoning the term she uses in her paper.

Wurmbrand's proposal of Agree can be summarized as described in (66).

(66) A feature [F: _] on α is valued by a feature [F: val] on β iff:

    a. β asymmetrically c-commands α.
    b. β is the closest matching goal to α.

(Wurmbrand 2012: 154)

Zeijlstra (2012)

Zeijlstra's proposal of Upward Agree (2012) is more ambitious than the one proposed by Wurmbrand (2012), in the sense that it aims to provide a general theory of Agree, which captures Agree not only at clausal level, but also within DPs, for example. Furthermore, his proposal of Upward Agree is based on a cross-linguistic meta-analysis, taking into consideration a wide range of typologically different languages.

Just as Wurmbrand, Zeijlstra (2012) assumes Agree to take place in an upward direction. However, in line with the standard version of Agree (Chomsky 2000, 2001), and more recently Bošković (2007), he argues that "Agree is driven by the need of uninterpretable features to be checked" (Zeijlstra 2012: 514). His proposal is summarized in (67).

(67) α can agree with β iff:

    a. α carries at least one uninterpretable feature and β carries a matching interpretable feature.
    b. β c-commands α.
    c. β is the closest goal to α.

Furthermore, Zeijlstra follows Bošković (2007) in a series of assumptions, in order to provide an explanation to the problems of the standard version of Agree. The author abandons the Activation Condition; that is, in his proposal, one instance of Agree does not render a Goal inactive. Therefore, Multiple Agree is no longer a problem, since each Probe can check its uninterpretable features in Upward Agree against one Goal. He also assumes that Agree can only take place unidirectionally and that "[once] Reverse Agree is no longer allowed, movement can be triggered to instantiate a proper Agree configuration" (Zeijlstra 2012: 513), similarly to what was proposed by Bošković (2007). Following the same reasoning, intermediate step in successive cyclic movement are no longer a problem, because if an uninterpretable feature cannot be checked within its local

c-command domain, this "forces movement towards the phase edge from where it may Agree with some higher goal" (Zeijlstra 2012: 521). Furthermore, the notion of Reverse Agree (in the sense of a secondary Agree relation as collateral effect of a primary downward Agree relation) disappears. In the cases where Reverse Agree is said to take place, such as between T and the subject DP, we rather find two separate Upward Agree relations. First the subject DP checks case against the matrix T in Upward Agree, and then it moves to SpecTP, so that T can check its phi-features against the subject DP.

Finally, one of the arguments used by Zeijlstra (2012) that are most relevant to the syntactic analysis of the non-anteriority CG is his explanation of the Sequence of Tense. In example (61), here repeated as (68), we find a past tense in the embedded clause ('was') that expresses a non-past situation (Mary is happy at the utterance time). Zeijlstra argues that in these cases, the verb contains uninterpretable temporal features that need to be checked against the interpretable temporal features of the main clause T head. In English, this past shift of the embedded verb is obligatory, however, in Portuguese this is not the case, as illustrated in (62), here repeated as (69a). Both the present tense and the past tense can occur to express a non-past situation. However, and crucially, this phenomenon only occurs if the main clause verb appears in a past tense, otherwise the embedded past tense obligatory expresses a situation located in the past, as shown in (69b).

(68) John said Mary was happy.

(69) a. *A   Mafalda disse que o   Rui estava / está doente.*
          the Mafalda said   that the Rui was   is   sick
          'Mafalda said that Rui was sick (at the moment).'
      b.
          *A   Mafalda diz   que o   Rui *estava / está doente.*
          the Mafalda says   that the Rui was   is   sick
          'Mafalda says that Rui is sick.'

The similarity with the alternation between the simple and the compound gerund in non-anteriority contexts is striking, as exemplified trough the contrast between (70a) and (70b). It seems therefore plausible to assume that the non-anteriority CG is another instance of Upward Agree, similar to the sequence of tense.

(70) a. *A Amália saiu de casa, tendo ido / indo*
     the Amália left of home AUX.GER go.PP go.GER
     diretamente ao aeroporto.
     directly to.the airport
     'Amália left home and went directly to the airport.'
  b. *A Amália sai de casa, *tendo ido / indo*
     the Amália left of home AUX.GER go.PP go.GER
     diretamente ao aeroporto.
     directly to.the airport
     'Amália leaves home and goes directly to the airport.'

4.2.4 Summary

Table 5 summarizes schematically some of the versions of Agree proposed in the literature and discussed in this section. Beyond other aspects that might differentiate the proposals, it is clear that two factors play a major role: (i) the directionality of Agree, and (ii) the trigger of Agree. For the purpose of this study, the upward directionality is crucial to the syntactical analysis proposed for the non-anteriority CG. Implicitly I have assumed Wurmbrand's approach, and only taken into account whether a given temporal feature is valued or not. For the sake of simplicity, the interpretability of these features was not discussed. Note, however, that, by definition, gerund clauses on their own cannot express tense (Oliveira 2013: 549). Therefore the temporal features present on the gerund T head are not only unvalued, but also uninterpretable. This makes the proposed syntactic analysis compatible both with Wurmbrand's and with Zeijlstra's version of Agree. It is beyond the scope of this dissertation to discuss the trigger of Agree. Acknowledging that both authors present good arguments for their proposals, this study remains agnostic about the trigger of this operation, and the omission of the interpretability property should not be understood as a theoretical statement, but rather as a simplification for the sake of clarity of exposition.

		Directionality	
		Downward	Upward
Trigger	Interpretability	Chomsky (2000, 2001); Bošković (2007)	Zeijlstra (2012)
	Valuation	Pesetsky and Torrego (2007)	Wurmbrand (2012)

Table 5: Different versions of Agree

4.3 Advantages and problems of the proposed analysis

4.3.1 Advantages

One advantage of the syntactical analysis proposed in section 4.1 is that it captures the asymmetries between the anteriority and the non-anteriority CG described in section 2.4 and explains the observed co-occurrence restrictions of the non-anteriority CG.

First of all, the anteriority CG can occur both on the left and on the right of the matrix clause, because the [+ ANT] feature that is responsible for the appearance of the compound form is located in the C head of the gerund clause and codifies the discourse relation. Therefore, the occurrence of the anteriority CG does not depend on any elements external to the gerund clause itself. The non-anteriority CG, on the other hand, can only occur in sentence-final position. If we assume that adjunction is possible both on the left and on the right, there is a need to explain why the non-anteriority CG can only occur on the right. One structural requirement of the syntactical analysis proposed in section 4.1 is that, in the case of the non-anteriority CG, the main clause T head and the gerund T head establish an Agree relation. This is only possible if there is c-command, i.e. the gerund clause needs to be adjoined below the scope of the matrix T head. Independently of the locus of adjunction that is assumed[18], a gerund clause adjoined below T on the left would have to appear interpolated somewhere between the subject (in SpecTP), the verb (raised to

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[18]VP or vP, as proposed by Lobo (2006) for the integrated gerund clauses, or another position completely, which would distinguish them from the traditional integrated gerund clauses.

T) and the rest of the VP of the main clause. This is problematic at least for two reasons. In Portuguese V raises to T and it is generally assumed that the subject moves to the specifier position of the TP in order to receive nominative case. In our analysis the gerund CP does not constitute a phase due to the incompleteness of the temporal features in T, and therefore the gerund clause would intervene both in the V to T movement and in the movement of the subject to SpecTP. The ungrammaticality of such interventions is shown in (71). Crucially, the same intervention effect impedes the acceptance of the anteriority CG as a low adjunct on the left, as illustrated in (72). This shows that the adjunction below T on the left side is impossible. However, the non-anteriority CG depends on the Agree relation with the main clause T head, which leaves the adjunction on the right side, i.e. sentence-finally, as the only option.

(71) *A   Ana   saiu, tendo   ido   diretamente para o   aeroporto,
     the   Ana   left   AUX.GER go.PP directly   to   the airport
     de   casa.
     of   home
     'Ana left home and went directly to the airport.'

(72) *A   Ana   saiu, tendo   tomado o   pequeno-almoço, de casa.
     the   Ana   left   AUX.GER take.PP the breakfast   of home.
     'Having had her breakfast, Ana left home.'

Second, the anteriority CG can co-occur with any tense in the matrix clause, because the relevant anteriority features are present on the gerund C head, and are therefore independent of the matrix clause. The non-anteriority CG, on the other hand, is dependent on feature valuation against the T head of the clause to which it is adjoined. This explains why the non-anteriority CG can only occur if the main (or the embedded clause to which it is adjoined, see example (44)) contains an [+ ANT] feature. However, if the main clause T head is valued for [- ANT], only the simple form can be licensed. This explains why the non-anteriority CG can only co-occur with certain verb forms (e.g. past tenses, compound infinitives) in the clause to which it is adjoined.

Third, the anteriority CG cannot be substituted by the simple form, without altering the meaning of the sentence. This is due to the fact that the features responsible for the occurrence of the compound form are the ones that codify the discourse relation, and therefore carry semantic information relevant to the interpretation of the sentence. In the case of the non-anteriority CG, contrariwise, the features responsible for the occurrence of the compound form are not the ones that codify the discourse

relation between the two situations, but rather the mere result of the necessity for feature valuation/checking. Therefore, the compound form does not carry the semantic information of the discourse relation, and should therefore be substitutable by the simple form in all cases without affecting the interpretation of the sentence. However, examples such as (73), show that this is not always the case. The sentence is grammatical both with the simple and the compound form, but the alternation is not free; i.e. the simple form implies that the website is still not updated at the utterance time, whereas the compound form implies that the site had not been updated for a time, but that it had already been updated at the utterance time.

(73) *Vários investigadores só atualizaram a sua página em*
      several researchers only updated the their website in
      inglês, estando / #tendo estado a página em português
      English be.GER AUX.GER be.PP the website in Portuguese
      muito desatualizada.
      very outdated
      'Several researcher only updated their English website and left their Portuguese website very outdated.'

Note, however, that the [+ ANT] feature responsible for the occurrence of the non-anteriority CG normally (and in this particular case) stems from the main clause T head. This T head codifies tense, i.e. the location in time of the situation described by the main clause. For this reason, in the case of the non-anteriority CG, the alternation between the simple and the gerund form is only free and does not cause semantic effects, if the situation described by the gerund clause is compatible with the temporal information contained in the main clause T head. In example (73), the matrix T head contains a feature locating the situation before the utterance time, therefore the situation described by the CG that occurs due to feature valuation cannot be semantically interpreted as located in the present.

Fourth, the syntactical analysis proposed in this chapter makes at least two empirical predictions. The first prediction is that the non-anteriority CG should not be possible when the gerund C head is lexically realized. In this case, the gerund V-T complex could not raise to C, and C would intervene in a potential Agree relation with the main clause T head. This prediction seems to be borne out, since the literature states the gerund clauses introduced by the preposition/complementizer *em* 'in' is only compatible with the SG (Móia and Viotti 2004: 137; Lobo 2006: 3). The second prediction concerns the cross-linguistic availability of the non-anteriority CG.

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Following our hypothesis, the posteriority CG in Portuguese, for example, is only possible, because the language possesses both a completely specified version of the the C head codifying posteriority discourse relations (C [+ POST, - ANT] and an underspecified version of the same C head [+ POST, 0 ANT]. Whether other languages also possess such an underspecified version of the posteriority C head remains an open question. However, in the cases where the discourse relation does not specify the temporal relation between the two situations (as for example Comment, Contrast, Continuation), the non-anteriority CG should be readily available. The second prediction is, therefore, that all languages that possess a comparable structure to the CG should allow for the occurrence of a non-anteriority CG expressing discourse relations that do not specify the temporal ordering of the two situations. This prediction will be tested in the chapters 5 and 6.

Finally, one of the shortcomings of previous analyses of the CG is that they cannot account for cases such as (44), here repeated as (74), where the gerund clause is neither anterior to the situation expressed by the clause it is adjoined to, nor to the utterance time. I will argue that the syntactical analysis proposed in this chapter neatly explains such occurrences.

(74) a. A witch looks into the future and predicts the following:
       "Tomorrow Pedro will have a car accident and ...
       ...[daqui   a   um   mês,   no   tribunal, ele admitirá
       from here   to one month in the court   he admit.FUT
       *[ter   circulado em excesso de velocidade]$_{ev1}$, [**tendo***
       AUX.INF drive.PP in   excess of speed   AUX.GER
       causado, por isso, o   acidente]$_{ev2}$]$_{ev3}$."
       cause.PP for that the accident

       '...in a month, in court, he will admit that he drove too fast,
       causing the accident.'
    b. n < [ev1 < **ev2**] < ev3

In cases such as (74), the compound morphology can only be explained through an inferred discourse relation, namely between ev2 (the situation expressed by the gerund clause) and ev3 (the situation expressed by the highest matrix clause, see (74b)). However, the gerund clause is adjoined to an infinitival complement clause and expresses posteriority (discourse relation Result, in this case) to this infinitival clause. As discussed in Section 2.5, it is not plausible to assume that the gerund C head would be merged with multiple temporal features to specify the temporal relation not only with the clause to which it is adjoined, but also with the finite

main clause. Therefore, this morphological realization of an inferred discourse relation actually constitutes an argument in favor of the proposed syntactical analysis.

That is, the temporal features on the gerund T head are underspecified and require valuation through a higher head with matching features. A simplified derivation of (74) is represented in (75).

1. The gerund T head is merged containing an underspecified [? ANT] feature, and raises to C (Step 1). The C head of the gerund clause (ev2) contains [+ POST] feature that links it to the infinitival clause (ev1), but presents a neutral value for the anteriority feature ([0 ANT]. Therefore the gerund T head has to probe higher up the structure, until it finds a suitable goal.

2. The C head of the infinitival complement clause (ev1) contains a [+ ANT] feature that links it to the finite matrix clause (ev3); as a result, the compound infinitive is licensed (Step 2).

3. Since the T head of the infinitive clause is then valued for [+ ANT], the gerund T head can also value its feature in Upward Agree (Step 3). In this case, the correct configuration for the licensing of the non-anteriority CG is created.

(75)
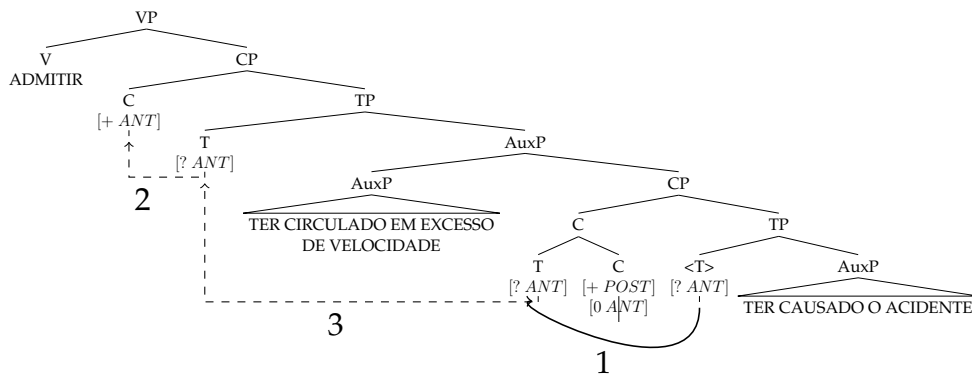
As a concluding remark to this section, I do not believe this syntactical analysis of the non-anteriority CG to be fundamentally incompatible with Zwart's general premise of post-syntactical and feature-driven morphology (2017a; 2017b). The important question seems to be the origin of the temporal features. In a purely morphological analysis, the non-finite T head is already merged with the relevant temporal features, and based on these features the correct form is selected from the verb paradigm. Following the syntactic analysis I propose in 4.1, it is also conceivable that the CG is also selected from the paradigm based on its temporal features;

however, I argue that these features are merged underspecified and only become valued during the derivation. A detailed discussion of Zwart's analysis is not the topic of this study, and for the remainder of this work I will continue to assume that compound verb forms need to be introduced as separate heads (Aux and V) into the enumeration.

4.3.2 Problems

However, the syntactical analysis proposed above also presents a series of problems, which will be discussed in this section.

First of all, the syntactical analysis relies crucially on the notion of Upward Agree. In the proposed analysis the gerund T head is defective, due to its underspecified temporal features, and therefore needs to probe up the structure in search of a compatible Goal. I assume this Goal to be the main clause T head (or the T head of the clause to which the gerund clause is adjoined). The Agree relation is, therefore, upward, i.e. the Goal c-commands the Probe. This analysis is incompatible with the traditional version of Agree, where the Probe c-commands the Goal, as proposed by Chomsky (2000; 2001; see also Pesetsky and Torrego 2007), since it would be difficult to justify a defectivity of the main clause T head, which would force it to establish a downward Agree relation with the gerund T head[19]. I consider, however, that the literature discussed in section 4.2 (e.g. Wurmbrand 2012, Zeijlstra 2012, Bjorkman and Zeijlstra to appear) provides convincing arguments supporting the idea of Upward Agree, at least in certain cases.

Another problem of the syntactical analysis proposed above concerns the classification of gerund clauses that was proposed by Lobo (2006, 2013). The author argues that there at least two different types of gerund clauses, which present a clearly distinguishable behavior with regard to certain internal and external properties. Lobo (2006: 16-17) argues that there are, on the one hand, the integrated gerund clauses, which are adjoined in a low position (possibly VP or vP), such as manner clauses, as exemplified in (76). On the other hand, the author argues that there are peripheral gerund clauses, which are adjoined to a higher projection (possibly TP or CP[20]), such as causal or temporal adjunct clauses (ibid.).

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[19]Adjunct clauses are by definition not a part of the argumental structure of the verb, and should therefore have no effect whatsoever on the lexical and functional heads of the clause they are adjoined to.

[20]However, there seems to be more empirical evidence to support an adjunction below CP. In structures where C is lexically realized, the gerund clauses that are usually considered peripheral, such as the causal gerund clauses (see Lobo 2006), occur on the right

(76) *A   Catarina   cozinhava   cantando.*
    the Catarina cooked   sing.GER
    'Catarina cooked singing.'

Lobo (2006: 10) classifies clauses with the posteriority CG as peripherals, and states that the compound form is generally not possible in integrated gerund clauses (ibid.: 15). Since the syntactical analysis proposed here crucially depends on the adjunction below T of the non-anteriority CG clauses, we will now discuss the properties Lobo uses to distinguish integrated and peripheral gerund clauses.

The author proposes, on the one hand, internal differences between the two types of adjunct gerund clauses, and, on the other hand, differences regarding the compatibility with certain structures. The internal properties are the following (Lobo 2006: 10-14):

a) integrated gerund clauses cannot appear with a lexically realized subject, whereas peripheral gerund clauses can;

b) in integrated gerund clauses the null subject has to be co-referential with subject of the main clause, whereas in peripherals it can be disjoint;

c) in integrated gerund clauses the tense of the gerund clause is dependent on main clause tense, whereas peripheral gerund clauses can have an independent tense;

d) in integrated gerund clauses the CG cannot occur, whereas in peripherals it can;

e) integrated gerund clauses usually express discourse relations such as manner, condition or overlapping, whereas peripheral gerund clauses usually express cause or concession.

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side of the C head, as illustrated in (i) and (ii) below. This word order is incompatible with an adjunction to CP, since this would locate the gerund clause either on the left side of the lexical material in C (left adjunction) or in sentence final position (right adjunction).

(i) *Acho   que, tendo   fechado   a   porta à   chave, o   Zé se   sentia*
    think that AUX.GER close.PP the door with key   the Zé 3.SG felt
    tranquilo.
    calm
    'I think that, having closed the door by key, Zé felt calm.'

(ii) *Quem é   que, tendo   fechado   a   porta à   chave, se   sentia*
    who is that AUX.GER close.PP the door with key   3.SG felt
    tranquilo?
    calm
    'Who felt calm, having closed the door with key?'

(examples adapted from Lobo 2006: 13)

These properties are, indeed, useful to distinguish certain types of gerund clauses (e.g. manner vs. causal gerund clauses). However, they do not provide sufficient evidence to disregard the adjunction below T of non-anteriority CG clauses. The properties a), b) and c) show that there is a type of gerund clauses that has to be obligatorily merged in a low position in order to instantiate the correct configuration for obligatory control, and seems to have an overall more defective functional structure. However, these properties do not provide positive evidence for the adjunction above T of the so-called peripheral gerund clauses. Studies of complement clauses, both finite and non-finite, have shown that the insertion below TP is compatible with lexically realized subjects, with disjoint reference of embedded null subjects, and with independent tense (see for example Gonçalves et al. 2014). The properties d) and e), on the other hand, are purely descriptive and do not provide any theory-based arguments about the locus of adjunction.

Now, we will consider the differences in the syntactic behavior of the two types of gerund clauses, which raise more serious doubts about the adjunction below T of the non-anteriority CG. Lobo (2006: 7-10) proposes the following phenomena to distinguish integrated from peripheral gerund clauses:

f) integrated gerund clauses can appear in cleft structures, whereas peripherals cannot;

g) integrated gerund clauses can be under the scope of matrix negation or focus adverbs, whereas peripherals cannot;

h) integrated gerund clauses can answer wh-interrogatives, whereas peripherals cannot;

i) integrated gerund clauses can occur in alternative interrogative and negative constructions, whereas peripherals cannot;

j) integrated gerund clauses usually occur in sentence final position, whereas peripheral clauses can occur both in sentence-initial and sentence-final position.

The sentences (77a-d) illustrate that the majority of these phenomena are, indeed, hardly compatible with the non-anteriority CG (here exemplified with the posteriority CG) according to an informal acceptability judgment task.

(77) **Posteriority CG**

    a. *Foi tendo ido diretamente para o aeroporto que*
        was AUX.GER go.PP directly   to   the airport that
        a Rita saiu de casa. (Não foi tendo passado
        the Rita left of home not was AUX.GER pass.PP

antes   pela   casa   da   Clara.)
before by.the house of.the Ana

'It was directly to the airport that Rita went. (It was not stopping by Clara's house first.)'

b. *?/?? A   Rita não saiu de casa   tendo   ido*
      the Rita not left of home AUX.GER go.PP

diretamente para o   aeroporto (mas sim tendo
directly   to   the airporto   but   yes AUX.GER

passado   antes   pela   casa   da   Clara).
passed.PP   before by.the house of.the Clara

'Rita did not leave home and went directly to the airport (instead she stopped by Clara's house first).'

c. - *Quando / porquê é   que a   Rita saiu de casa?*
    when   why   is that the Rita left of home

- **Tendo   ido   para o   aeroporto.*
  AUX.GER go.PP to   the airport

'- When/why did Rita leave home?
- Having gone to the airport.'

d. *OK/? A   Rita saiu de casa   tendo   ido   diretamente*
     the Rita left of home AUX.GER go.PP directly

para o   aeroporto ou tendo   passado   antes   pela
to   the airport   or AUX.GER pass.PP   before by.the

casa   da   Clara?
house of.the Clara

'Did Rita leave home and went directly to the airport or did she stop by Clara's house first?'

However, at least some of these phenomena seem to be acceptable with the anteriority CG, as shown in (78a-d).

(78) **Anteriority CG**

a. *OK Foi tendo   comido   apenas uma maçã que o   Rui*
    was AUX.GER eat.PP only   a   apple that the Rui

fez   a   viagem. (Não foi tendo   almoçado antes.)
made   the trip   not was AUX.GER lunch.PP before

'It was having eaten only an apple that Rui made the trip. (It was not having had a proper lunch before.)'

b. *OK O   Rui não fez   a   viagem tendo   já*
    the Rui not made   the trip   AUX.GER already

almoçado, (mas sim tendo   comido   apenas uma maçã).
lunch.PP   but   yes AUX.GER eat.PP only   a   apple

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'Rui did not make the trip having had lunch before (instead he made it having eaten only an apple).'

c. - *Quando / porquê é que o Rui foi para casa?*
   when   why   is that the Rui went to   home

   - *??/*Tendo acabado o trabalho.*
   AUX.GER finish.PP the work

   '- When/why did Rui go home?
   - Having finished his work.'

d. *OK O Rui fez a viagem tendo já almoçado*
   the Rui made the trip AUX.GER already lunch.PP

   ou tendo comido apenas uma maçã?
   or AUX.GER eat.PP only an apple

   'Did Rui make the trip having already had lunch or having eaten only an apple?'

The data presented in (78) seems to indicate that anteriority CG clauses can exhibit a syntactical behavior similar to the one of integrated gerund clauses. In (78b), for example, the gerund clause is under the semantic scope of the matrix negation. This example shows that temporal gerund clauses with CG can indeed be adjoined to a lower position than the literature has traditionally assumed. Since it is unlikely that temporal gerund clauses require a different adjunction position depending on the temporal relation they express, this raises the question of why the examples in (77) with the posteriority CG are mostly ungrammatical.

As a matter of fact, the syntactical analysis proposed in section 4.1 can explain some of the asymmetries observed between the data in (77) and (78), or, in other words, it can explain why the non-anteriority CG is incompatible with some of the syntactical phenomena described by Lobo (2006) for the integrated gerund clauses. Following our analysis, the non-anteriority CG can only occur when the gerund T head establishes an Agree relation with the main clause T head. In cleft structures, as exemplified in (77a), or in answers to wh-questions, as exemplified in (77c), the gerund clause appears dislocated/isolated from its main clause. This dislocation in the case of cleft structures or the isolation in the case of answers to wh-interrogatives breaks the Agree relation, and therefore turns the appearance of the non-anteriority CG ungrammatical.

The examples in (77b) and (77d), on ther other hand, were not considered completely ungrammatical by the consulted informants, which seems to indicate that there are other factors at play concerning the grammaticality of the CG in certain constructions. We also need to take into

consideration that these constructions give rise to rather long and complex sentences, whence the capacity to process these sentences might also play an important role. However, further analysis of these structures lies beyond the scope of the present study, and requires more research and empirical testing of the acceptability of the different kinds of CG in the structures discussed above.

Part II

Evidence from other Romance languages

Chapter 5

Description of the compound gerund in Romance

5.1 Catalan

The use of the gerund in Catalan is more restricted in comparison to other Romance languages. The normative *Gramàtica Catalana* states that the gerund can only be used to express simultaneous events (Fabra 1956: 88) and considers incorrect the use of the gerund to express posteriority relations (ibid.: 89). The compound gerund is not mentioned.

The descriptive *Gramàtica de la Llengua Catalana* refers the possibility of the compound gerund, either with an overt subject or with null subject that is co-referent with the main clause subject or object (Institut d'Estudis Catalans 2016: 1211). In these cases the CG is said to necessarily express anteriority to the situation described by the main clause (ibid.: 1212, 1215). This anteriority can either be merely narrative or causal, as in (79). The authors only mention preposed CG.

(79) *Havent   plogut, vam   suspendre el   partit.*
      AUX.GER rain.PP AUX.3P suspend   the   match
      'Having rained, they canceled the match.'

<div align="right">(Institut d'Estudis Catalans 2016: 1211)</div>

Furthermore, the authors stress that "és inadequat l'ús del gerundi quan no hi ha simultaneïtat[21]" (Institut d'Estudis Catalans 2016: 1214) and explicitly state that simple gerunds used to express posteriority relations,

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[21]Translation: the use of the gerund is inadequate when there is no simultaneity.

as in (80), are incorrect (ibid.: 1214; for an in-depth analysis of the discourse relations that can be expressed by the SG in Catalan, see Espunya 2010).

(80) *S'han   examinat   aprovant   l'assignatura.
      3P-AUX.3P examine.PP pass.GER   the.subject
      'They took the test and passed the subject.'

<div align="right">(Institut d'Estudis Catalans 2016: 1214)</div>

In summary, in Catalan, according to the descriptions in the literature, the temporal interpretation of the gerund seems to be more restricted than in Portuguese, namely the simple gerund can only express simultaneity and the compound form can only express anteriority to the situation described by the main clause.

5.2   French

In French, the verb form "root + *ant*" gives rise to two different verbal forms, commonly designated as *participe présent* (*chantant* 'singing') and *gérondif* (*en chantant* 'singing')[22]. The *Grammaire du Français Contemporain* states that the *gérondif* functions as an adverb and represents a circumstance to the situation expressed by the verb to which it is related (Chevalier et al. 1992: 374). The *participe présent*, on the other hand, either qualifies a noun or a pronoun, in the manner of a relative clause (i.e. acting as a nominal modifier), or it can appear in what the authors call independent or absolute construction, i.e. adjunct clauses (ibid.: 374-375). A further difference mentioned by the authors is that "le gérondif ne possède pas de forme composée[23]", whereas the *participe présent* does (ibid.: 374). Therefore, I will henceforth focus on the *participe présent* and when speaking about the gerund in French this is to be understood as the *participe présent*.

The *Grammaire du Français Contemporain* states that the compound form of the *participe présent* "exprime l'aspect de l'accompli et une relation temporelle d'antériorité par rapport au verbe principal[24]", as exemplified in (81) (ibid.: 378).

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[22]The authors of the *Grammaire du Français Contemporain* consider that the preposition that precedes the gerund has lost its prepositional status and should be considered an affix (Chevalier et al. 1992: 374).

[23]Translation: the gerund does not possess a compound form.

[24]Translation: expresses the accomplished aspect and temporal relation of anteriority with respect to the main clause verb.

(81) *S'étant   repenti, le prissionier fut libéré.*
3S-AUX.GER repent.PP the prisoner   was liberated
'Having repented, the prisoner was freed.'

(Chevalier et al. 1992: 378)

As for the simple form of the *participe présent*, the *Grammaire du Français Contemporain* states that the simple form expresses "l'action en cours de développement" and that in absolute constructions (i.e. adjunct clauses) "le participe peut marquer un temps différent de l'époque du verbe principal[25]" (ibid.: 375). However, the authors do not specify the temporal and rhetoric relations that can be expressed by this form, namely whether it can be both posteriority and anteriority or not.

As opposed to the other Romance languages discussed in this chapter, in French an overt subject in the gerund clause occurs pre-verbally (Chevalier et al. 1992: 375).

5.3   Galician

To the best of my knowledge, none of the consulted Galician grammars (Álvarez et al. 1995; Álvarez and Xove 2002; Freixeiro 2006) explicitly mentions the CG. With regard to the SG, the *Gramática de la Lingua Galega* states that the gerund usually expresses temperal overlapping and that "os usos do xer. con valor temporal de posterioridade ó VP non son en xeral aceptables[26]" (Álvarez and Xove 2002: 320). Even though the authors mention that the adjunct gerund clauses that occur after the main clause generally express consequence, they indicate that the acceptability of sentences such as (82) is questionable (Álvarez and Xove 2002: 325). On the other hand, Freixeiro (2006: 422) states that in certain cases the postposed gerund clearly expresses posteriority and that this use is perfectly acceptable.

(82) *Investiu moito na   fábrica, obtendo   grandes beneficios.*
invested much in-the factory obtain.GER big   benefits
'[He/she] invested a lot in the factory and obtained great benefits.'

(Álvarez and Xove 2002: 325)

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[25]Translation: the *participe [présent]* can express a time which is different from the one of the matrix verb.

[26]Translation: The uses of the gerund with temporal value of posteriority to the VP are generally not acceptable.

Gerund clauses can have either a null subject, frequently co-referent with the matrix subject or direct object, or an overt subject (Álvarez and Xove 2002: 321). In the latter case, the subject appears always after the gerund form. The *Gramática de la Lingua Galega* does not explicitly mention the CG. For this reason, a comprehensive description of the subject position in compound gerund clauses (after the auxiliary or after the participle) is not available. However, a search in the CORGA corpus reveals that all the instances of lexically realized subjects occur after the participle (similar to what we find in Spanish, see next section), as exemplified in (83).

(83)   *[...] a   mellor enerxía é   a   que   non é   necesario   producir,*
          the best   energy is the that not is necessary produce
          e   tendo   acadado **Galiza** *a   suficiencia   eléctrica*
          and   AUX.GER reach.PP Galicia the sufficiency electric
          (por certo   cunha   importante porcentaxe   de renovábeis,   ao
          by the way with.a important percentage of renewable on.the
          contrario que   outros lugares do   Estado) non precisaría
          contrary than other places of.the state   not would.need
          producir   máis.
          produce   more
          '[...] the best energy is the one that does not have to be produced, and with Galicia having reached electric self-sufficiency (by the way with an important percentage of renewable energies, as opposed to other places of the country) it would not need to produce more.'

The lack of research and explicit information about the CG in Galician, furthermore, leaves us without knowledge on the temporal values that can be expressed by this form. However, in the corpus CORGA, there can be found examples of the compound form both with anteriority, illustrated in (83), and non-anteriority interpretation, as illustrated in (84), for temporally unspecified relations. Furthermore, there are examples that are ambiguous, but could be interpreted as posteriority, as in (85).

(84)   *Non sería   moi   grande esta conta, xa que o   Ourense*
          not   would very big   this sum   since   the Ourense
          rematou a   tempada tendo   marcado 98 tantos e
          finished the season   AUX.GER score.PP 98 so   and
          encaixados   soamente sete.
          received.PP only   seven
          'This sum would not be very big, since the [football club] Ourense

finished the season by having scored 98 goals and only received seven.'

(85) *[...] os   tipógrafos   de Santiago asociáronse   tendo*
    the   typographers of Santiago associated-3P AUX.GER
    celebrada xa   a   primeira sesión.
    hold.PP   already the first   session
    'The Santiago typographers created an association having held already their first reunion.'

(CORGA)

5.4 Spanish

In the *Gramática Descriptiva de la Lengua Española*, the CG is only briefly discussed. The author of the relevant chapter refers "el carácter perfectivo[27]" of the CG (Fernández Lagunilla 1999: 3466) and that it expresses "anterioridad mediata[28]", as opposed to immediate anteriority, which can be expressed by *en + simple gerund*[29] (ibid.: 3470-1). All examples given in the text are cases of the anteriority CG, as in (86) and (87). The *Nueva Gramática de la Lengua Española* goes further and explicitly states that "la interpretación de anterioridad es la única posible en el gerundio compuesto[30]" (Real Academia de la Lengua Española 2009: 2061). Brunet Ros (2016: 8) adds furthermore that nowadays the CG is limited to formal register, whereas in the *Siglo de Oro* it was much more frequent.

(86) *Aún habiéndose   dicho   que se callaran,   los niños*
    even AUX.GER-CL   say.PP that CL be-quiet.SBJ.3P the children
    seguían   gritando
    continued   shout.GER
    'Despite having been told to be quiet, the children continued to shout.'

(Fernández Lagunilla 1999: 3455)

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[27]Translation: the perfective character.
[28]Translation: mediate anteriority.
[29]However, the form *en + simple gerund* seems to be archaic and is not used in modern peninsular Spanish anymore (Gemma Rigau p.c.).
[30]Translation: the anteriority interpretation is the only one possible for the compound gerund.

(87) *Falleció el día 5 de diciembre de 1995 en Zaragoza, a los*
died the day 5 of December of 1995 in Zaragoza at the
47 años de edad, habiendo recibido los Santos Sacramentos.
47 years of age AUX.GER receive.PP the Holy Sacraments
'He died the 5th of Decembre 1995 in Zaragoza, at the age of 47,
(after) having received the Holy Sacraments.'

(El País, 7-XII-1995, 50 apud Fernández Lagunilla 1999: 3471)

As for the simple gerund, on the other hand, the *Gramática Descriptiva de la Lengua Española* refers that "el significado básico del gerundio temporal es el de simultaneidad[31]" (Fernández Lagunilla 1999: 3467). However, as mentioned above, introduced by the preposition *en* 'in', the SG can also express immediate anteriority. On the other hand, the question whether the SG can (or rather should) express posteriority has been heatedly debated among Hispanic scholars (for an overview, see Lepre Pose 2006). The *Nueva Gramática de la Lengua Española* states that the posteriority simple gerund "se considera hoy incorrecto cuando introduce una mera sucesión temporal[32]" and is only acceptable if it denotes immediate posteriority or causal, consecutive or concessive relations (Real Academia de la Lengua Española 2009: 2061-2062).

Interestingly, however, to the best of my knowledge, Spanish is the only language under study here, where the posteriority CG is explicitly mentioned in a normative grammar. In his critique of the Bogotan variety of Spanish, (Cuervo 1907: 195) mentions that sentences such as (88), where the CG expresses posteriority, are incorrect. He notes, however, that these cases are frequently found in journals and badly written texts (ibid.).

(88) *También dispuso la Academia que [...] D. Pascual de*
also decided the Academy that Mr. Pascual de
Gayangos examinase las dichas inscripciones [...], habiendo
Gayangos examines the said inscriptions AUX.GER
poco después presentado [...] el presente informe.
little after present.PP the present report
'The Academy also decided that [...] Mr. Pascual de Gayangos
should examine the said inscriptions, and presented shortly after
[...] the present report.'

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[31]Translation: the basic meaning of the temporal gerund is the one of simultaneity.

[32]Translation: is nowadays considered incorrect when it introduces mere temporal succession.

A *corpus* search in the Corpus de Referencia del Español Actual (CREA) with the query "habiendo + past participle" yields several non-anteriority compound gerund. In (89), the compound gerund is used to express posteriority, in (90), inclusion (in connection with an Elaboration discourse relation), and, in 91), a temporally unspecified discourse relation.

(89) *El doctor Asencio se inició en Publicidad Causa en 1949,*
the doctor Asencio 3S started in Publicidad Causa in 1949
habiendo destacado en los diversos cargos que le
AUX.GER excel.PP in the different responsibilities that him
cupo desempeñar.
had.to hold
'Doctor Asencio started at Publicidad Causa in 1949 and excelled at the different responsibilities that he had to hold.'

(El Comercio 1975-01-14 apud CREA, *subcorpus* Peru)

(90) *Asimismo, ha colaborado con organismos de cooperación*
furthermore has collaborated with organisms of cooperation
con el Tercer Mundo, habiendo instalado ya más
with the third world AUX.GER install.PP already more
de una treintena de proyectos en estos países.
than one thirty of projects in these countries
'Furthermore, he has collaborated with institutions of cooperation with the third world, having already installed more than thirty projects in these countries.'

(Página Web 2000, 00206008, apud CREA, *subcorpus* España)

(91) *Todo el pueblo se había desplomado, desde la iglesia hasta*
all the village 3S had collapsed from the church to
la última vivienda, habiendo quedado en pie, como testigo
the last house AUX.GER stay.PP on foot as witness
solitario de la ruina, la construcción baja y recién
solitary of the ruin the construction low and recently
levantada de la escuela.
built of the school

'The whole village had collapsed, from the church to the last house, and only the low and recently built school was left standing, as sole witness of the tragedy.'

(Revilla 1976 apud CREA, *subcorpus* Guatemala)

These examples show that in the CREA the non-anteriority CG is attested. This raises several questions: Are these occurrences of the non-anteriority CG marginal productions or do they belong to a diachronic, dialectal or sociolectal variety of Spanish that allows this kind of structures? Most of the non-anteriority CG found in the corpus do, in fact, stem from the Latin-American subcorpus. As discussed above, at least in the Bogotan variety of Spanish of the 19th century, the posteriority CG seems to have been productive (see Cuervo 1907). Furthermore, Batllori et al. (2017) have shown that, due to language contact, in the Ecuadorian variety of Spanish, the SG has acquired new temporal values, which do not occur in Peninsular Spanish. The question of whether the non-anteriority CG is also possible in the Peninsular variety will be addressed in the next chapter.

In gerund clauses, both with SG and CG, the subject can be both lexically realized or null (Real Academia de la Lengua Española 2009: 2054). In the case of the former, the subject appears after the verb(s). The interpolation of the subject between the auxiliary and the participle is nowadays strongly marked, but was more frequent in earlier stages of the language (ibid.: 2056; Brunet Ros 2016: 36). The authors propose the following analysis of this linguistic change:

> Se piensa generalmente que la alternancia entre las dos opciones [...] es posible como resultado de un proceso variable de reestructuración o reanálisis. En la segunda variante [no interpolation], "*haber* + participio" se analiza con un solo núcleo verbal al que se pospone el sujeto, pero en la primera [interpolation] se fragmenta como las perífrasis verbales, de forma que el sujeto puede intercalarse entre los dos componentes.[33] (Real Academia de la Lengua Española 2009: 2056)

This preferential insertion of the subject after the participle in Spanish contrasts with Portuguese, where the subject usually appears interpolated between auxiliary and participle (Lobo 2013: 2051).

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[33]Translation: It is generally thought that the alternation between the two options is possible as result of a variable process of restructuring or reanalysis. In the second option [no interpolation], "*haber* + participle" is analyzed as only one verbal head which precedes the subject, but in the first option [interpolation] it is fragmented just like the verbal periphrases, and therefore the subject can occur between the two components.

5.5 Summary

We have seen that in other Romance varieties, such as Catalan, French, Galician and Spanish, an equivalent form of the Portuguese *gerúndio composto* exists. However, with exception of a normative grammar of Bogotan Spanish from the 19th century (Cuervo 1907), none of the consulted literature mentions the possibility of the compound form expressing anything besides anteriority. The collected corpus data yields some examples of the non-anteriority CG (mainly in the Spanish CREA), but these are often ambiguous and not sufficient in number to derive any robust conclusions on the acceptability of the non-anteriority CG, in any of its subtypes, in the languages under study. It was therefore decided to carry out an exploratory acceptability judgment task with a French, a Galician and a Spanish group of native speakers[34], as well as with a Portuguese control group.

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[34]The decision to exclude Catalan group was made for two reasons. First, on a more practical note, access to a sufficient number of Catalan speakers proved to be difficult. Secondly, as discussed above, the use of the gerund (even the simple form) in Catalan seems to be the most restrictive among the Romance languages under study. The likelihood of finding any non-anteriority values for the CG seemed therefore slim. I hope, however, to extend the developed test to Catalan as well as to other Romance varieties in future research.

Chapter 6

Acceptability judgment test

6.1 The test

In this section, I will describe the exploratory judgment test that was created in order to determine the acceptability of the non-anteriority CG, and the factors possibly influencing it in different Romance languages. For each temporal relation (anteriority, posteriority, inclusion, unspecified temporal relation), sentences found in corpora were adapted, in order to mimic the journalistic register to make the appearance of the CG more natural[35].

In the literature discussed in the previous chapter, we have seen that one distributional factor that distinguishes the CG in the languages under study is the subject position. In Portuguese, the subject occurs interpolated between the auxiliary and the participle, in French it occurs before the auxiliary and in Spanish and Galician it occurs after the participle. For this reason, the presence or absence of an overt subject was included as a factor to control for in the test. For each temporal relation there were, therefore, sentences with a co-referent null subject in the gerund clause and with a lexically realized disjoint subject.

If the syntactical analysis presented in Chapter 4.1 is correct, the non-anteriority CG can only occur if the main clause T head contains a [+ ANT] feature. It was therefore decided to use the past tense in the matrix clause of all tested sentences. In Portuguese and Galician, the *pretérito perfeito simples* was used, whereas in Spanish and French the compound past tenses (*pretérito perfecto compuesto* and *passé composé*, respectively) were used.

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[35]In all languages under study, the CG is strongly marked in oral and/or informal registers and occurs most frequently and naturally in formal registers, such as journalistic texts.

The same basic set of sentences was used in all four languages. However, the necessary adaptations concerning word order and subject placement, as well as minor cultural and lexical adaptations, were made[36] and each test was double-checked by a native speaker to ensure that the sentences were correct (besides the tested acceptability of the CG).

Figure 2: Design of the answer options

Each sentence appeared both with the simple and the compound form of the gerund. The simple form served, on the one hand, as a distractor element, and, on the other hand, allowed us to determine whether the substitutability of the non-anteriority simple and compound gerund described for Portuguese is, in fact, borne out, and if the same happens in

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[36]For example name of political figures, football clubs, etc. (see Appendix for the full set of tested sentences).

the three other languages.

Participants were asked to judge the acceptability of every sentence on a Likert scale from 1 to 4, where 1 represents "completely bad" and 4 "completely good". Informants were also asked to indicate their temporal interpretation of the two situations described in the sentence, in order to be able to exclude acceptance values due to unintended temporal interpretations. The answer options for this second question were presented as multiple choice with predefined answers corresponding to the four temporal relations (anteriority, posteriority, inclusion, unspecified temporal relation) plus the option "The sentence doesn't make sense. / The sentence cannot be interpreted." Participants could also optionally add a comment for each sentence (see Figure 2 for an example). At the beginning of the test, the following sociolinguistic information was collected: age, region where the participant grew up, potential bilingualism, and explicit formation in Linguistics or related area.

6.2   Hypotheses

In Part I the CG in Portuguese was discussed and the more recent literature on the topic concludes that this verbal form can be used to express anteriority, posteriority, temporal inclusion and discourse relations which are temporally unspecified (Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008). Furthermore, Móia and Viotti (2004) found that the CG can, in certain cases, alternate freely with the SG, without affecting the interpretation of the sentence. This happens precisely in the cases of the non-anteriority CG, as opposed to the anteriority CG which does not alternate freely with the simple form[37]. The Hypothesis 0 is therefore (i) that the Portuguese control group accepts the CG in all four temporal interpretations (H0a), and (ii) that the acceptance values of the simple and the compound form of the non-anteriority gerund do not present significant differences, whereas in the case of anteriority they do (H0b).

The value which has traditionally been associated with the compound form of the gerund is the anteriority between the situation described by the matrix clause and the adjunct clause. This value is described by most of the consulted Romance grammars (Spanish, Catalan, Galician[38], and French) and is easily found in corpora, as shown in the previous chapter.

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[37]At least not in postposed gerund clauses, which are the topic of the present study. In preposed gerund clauses the behavior might vary and require a different analysis.

[38]The consulted Galician grammars did not explicitly mention the compound form of the xerúndio (see discussion in section 5.3).

Hypothesis 1 is therefore that all groups accept the anteriority CG (H1a) and that there is no significant difference in the acceptance values between the different groups (H1b).

On the other hand, the grammars of the other analyzed Romance languages either do not mention the non-anteriority CG or explicitly disallow it. However, we might want to consider that the consulted (mostly normative) grammars could give an incomplete picture of the whole range of possibilities that the grammar of the analyzed Romance languages offer for the use of the CG. In the previous chapter, it has been shown that cases of the non-anteriority CG are indeed attested in Spanish, Galician and French corpora. When working with corpus data there is always the risk that occurrences of a given phenomenon might be performance errors and not the product of the internalized grammar of the author.

However, as discussed in Section 4.1, a syntactic analysis of the non-anteriority CG would predict that at least some types of the non-anteriority CG should be possible in other typologically similar languages. The main idea of the syntactical analysis is that the non-anteriority CG appears when the temporal features in the gerund C head do not serve as a suitable goal to value the underspecified temporal features of the gerund T head. If this analysis is correct, in other Romance languages, we would expect the CG expressing temporally unspecified discourse relations to be the most readily available sub-type of the different non-anteriority CGs. The Hypothesis 2 is, therefore, that the temporally unspecified CG shows higher acceptance values than the inclusion and posteriority CG (H2a), and that those values tend towards acceptance of this form (H2b).

H0b predicted that the Portuguese group shows no significant differences in the acceptance of the non-anteriority simple and compound gerund. If some kinds of non-anteriority CG were indeed possible in the other three Romanche languages under study, and if they were the result of the same syntactic mechanism, we would expect them to show a similar behavior. Hpyothesis 3 is therefore, tentatively, that whenever a non-anteriority CG is possible, the simple form should present similar acceptance values.

H0a: The Portuguese control group accepts the CG in all four temporal relations.

H0b: The Portuguese control group exhibits similar acceptance values for the non-anteriority CG and SG.

H1a: All four groups accept the anteriority CG.

H1b: The are no differences in the acceptability of the anteriority CG between the different groups.

H2a: The acceptance of the temporally unspecified CG is higher than the acceptance of the inclusion and posteriority CG.

H2b: The temporally unspecified CG exhibits a tendency towards acceptance in all four groups.

H3: Whenever the non-anteriority CG is allowed in the French, Galician and Spanish groups, they present similar acceptance values for the simple and the compound gerund.

6.3   Participants

The four tests were answered by a total of 217 informants. The Portuguese test was answered by 45 informants, the Galician test by 47 informants, the Spanish test by 73 informants, and the French test by 52 informants. However, in each group it was decided to exclude certain informants to maintain homogeneous groups and minimize interference from other factors.

In order to control for the possible influence of multiple L1s, the Spanish group was subdivided in two groups, one monolingual group of Iberian Spanish speakers, one group of bilingual speakers (mainly Spanish-Catalan and Spanish-Galician bilinguals). The second group was excluded to avoid interference of the other L1[39]. Speakers of Latinamerican varieties had to be excluded due to the small number of informants pertaining to this group. Furthermore, Batllori et al. (2017) have shown that language contact in Latin-America has lead to innovations in the use of the gerund. For the analysis in this chapter, I will therefore only consider the Iberian Spanish monolingual group. The Spanish monolingual group is mostly comprised of speakers of the Andalusian variety of Spanish.

In the French group, again, speakers with multiple L1s were excluded[40]. Most informants grew up either in France or Belgium.

Furthermore, informants in the Galician test who indicated that they feel more at ease speaking in Spanish were excluded as well. Since it is nearly impossible to find monolingual Galician speakers, it was decided

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[39]The effect of Catalan and Galician bilingualism on the acceptability of the non-anteriority CG will be the topic of future studies.

[40]Among the informants there was a big share of French-Arabic bilinguals. The effects of a typologically different L1 on the acceptance of the non-anteriority will also be subject of future study, see previous footnote.

that this was the best possible option to exclude speakers with high interference levels from Spanish. All informants of this group grew up in Galicia.

In the Portuguese group, speakers with multiple L1s and speakers of non-European varieties were excluded. The resulting group was not further subdivided for two reasons. First, most participants are speakers of the central-meridional variety of EP (Segura and Saramago 2001), with the biggest share of informants being from the Lisbon area. This lack of a sufficiently large number of informants from other varieties makes a subdivision pointless. Second, previous studies did not mention any dialectal effects on the acceptance of the non-anteriority CG, and this phenomenon is therefore assumed to be homogeneous in all EP varieties.

Table 6 summarizes the informants that were considered for the analysis in the following section.

Group	N	Age	Explicit linguistic knowledge
French	36	range 20-59, mean=27,4	no (N=23), yes (N=13)
Galician	43	range 20-60, mean=35,1	no (N=9), yes (N=34)
Spanish	28	range 24-48, mean=29,4	no (N=16), yes (N=12)
Portuguese	41	range 22-54, mean=34,1	no (N=25), yes (N=16)
Total	**148**	**range 20-60, mean=31,9**	**no (N=73), yes (N=75)**

Table 6: Participants considered in the analysis

6.4 Results

6.4.1 Acceptability of the different temporal interpretations of the GC

In this section, the acceptability of the compound gerund with its different temporal interpretations will be discussed. For this purpose the mean

acceptance of each temporal relation by the four groups was calculated[41].

The CG with embedded co-referent null subject

In Figure 3, the acceptability of the CG with embedded co-referent null subject is represented for the four groups, where 4 represents completely grammatical and 1 completely ungrammatical. Supporting the findings in the literature, the Portuguese control group in the present test accepts the CG both in anteriority and non-anteriority contexts, with mean acceptance values ranging from 3.37 to 3.85. Interestingly, the anteriority CG is the one with the lowest acceptance value.
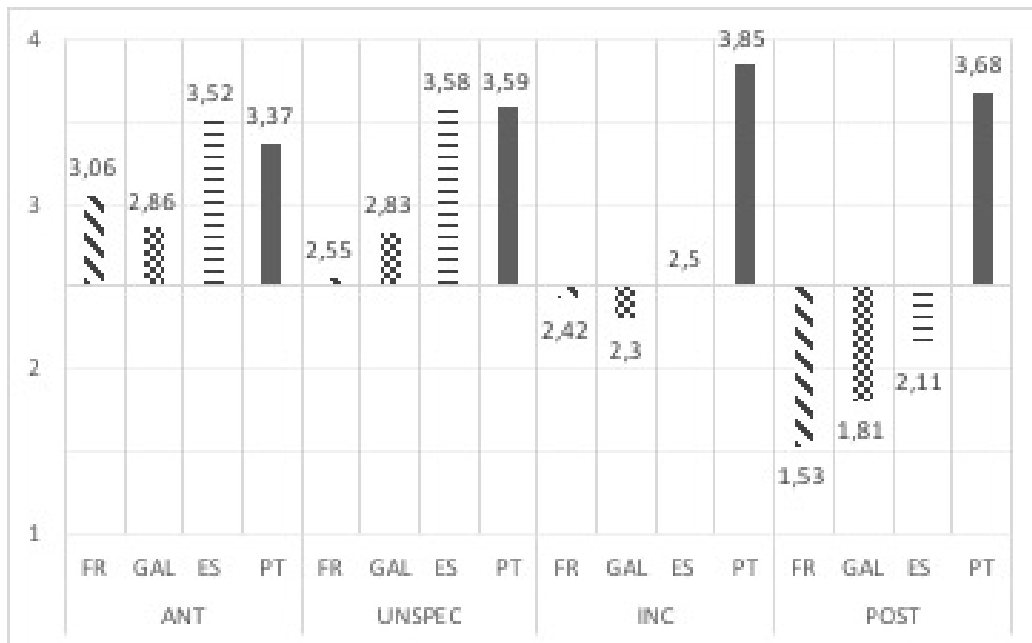
Figure 3: Acceptability of compound gerund with embedded co-referent null subject

In order to compare the results of the Portuguese control group with those of the French, Galician and Spanish groups, the Wilcoxon Rank Sum

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[41]In order to avoid false positive results, we excluded cases in which the informant considered a sentence grammatical but gave an unintended temporal interpretation. For example, if a sentence that was supposed to elicit a posteriority interpretation was considered grammatical, but the informant interpreted it as anteriority, the result was excluded.

Test[42] was applied. As for the **anteriority CG** with co-referent null subject, none of the three groups present significant differences with respect to the Portuguese control group (Spanish group W=530, p=.741; French group W=891, p=.091; Galician group W=1125, p=.019[43]).

As for the **temporal unspecified CG**, on the other hand, the Spanish group (mean=3.58) and the Portuguese control group (mean=3.59) show no statistically significant difference (W=516, p=.798), whereas the French (mean=2.55) and the Galician (mean=2,83) groups show significant differences to the Portuguese control group (W=1026, p<.001 and W=1076, p<.001, respectively). However, it is important to note that despite these statistical differences between the Portuguese and Spanish group, on the one hand, and the French and Galician group, on the other, all four groups present acceptance values above 2.5, which indicate a tendency towards acceptance[44].

This contrasts with the acceptance values for the inclusion and posteriority CG, where we find no values above 2.5 in any of the tested groups (except for the Portuguese control group). As for the **posteriority CG**, the French group (mean=1.53), the Galician group (mean=1.81) and the Spanish group (mean=2.11) show significant differences with respect to the Portuguese control group (W=1371, p<.001; W=1539, p<.001 and W=953, p<.001, respectively). As for the CG of **temporal inclusion**, we find again statistically significant differences between the French (mean=2.42), the Galician (mean=2.3) and the Spanish (mean=2.5) groups, on the one hand, and the Portuguese control group (mean=3.85), on the other (W=1097, p<.001; W=1464, p<.001 and W=953, p<.001, respectively).

However, it is noteworthy that in the French, Spanish and Galician groups, the acceptance values are all around chance level (2.5). These results can be, at least partially, explained by the explicit linguistic knowledge of the informants. Figure 4 shows the acceptance values for each language group divided into subgroups; informants with explicit linguistic knowledge on the right (lighter shade) and informants with no such knowledge on the left (darker shade). We observe very small intra-group differences in the Portuguese group (<0.35), whereas the other groups exhibit in cer-

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[42]I decided to use this test, because the data collected in the acceptability judgment task is not metric but ordinal, and the application of parametric tests, such as the T-test, was therefore not possible (Field 2009: 540).

[43]Applying the Bonferroni correction, all three p values need to be below .017 to be statistically significant (Field 2009: 373).

[44]However, especially the French group (mean=2.55) presents results around chance level, which might indicate that there are other factors at play, such as diachronic or dialectal variation, which require further research.

tain cases very high intra-group differences (up to 1.59). In the French group, those informants with explicit linguistic knowledge show higher acceptance rates for the CG in all four conditions. In the Galician and the Spanish groups, on the other hand, informants without explicit knowledge show higher acceptance values of the non-anteriority CG. In the case of the inclusion CG, this factor might contribute to explaining the near chance level results discussed above. As a matter of fact, every subgroup seems to present a tendency either towards grammaticality or ungrammaticality[45].
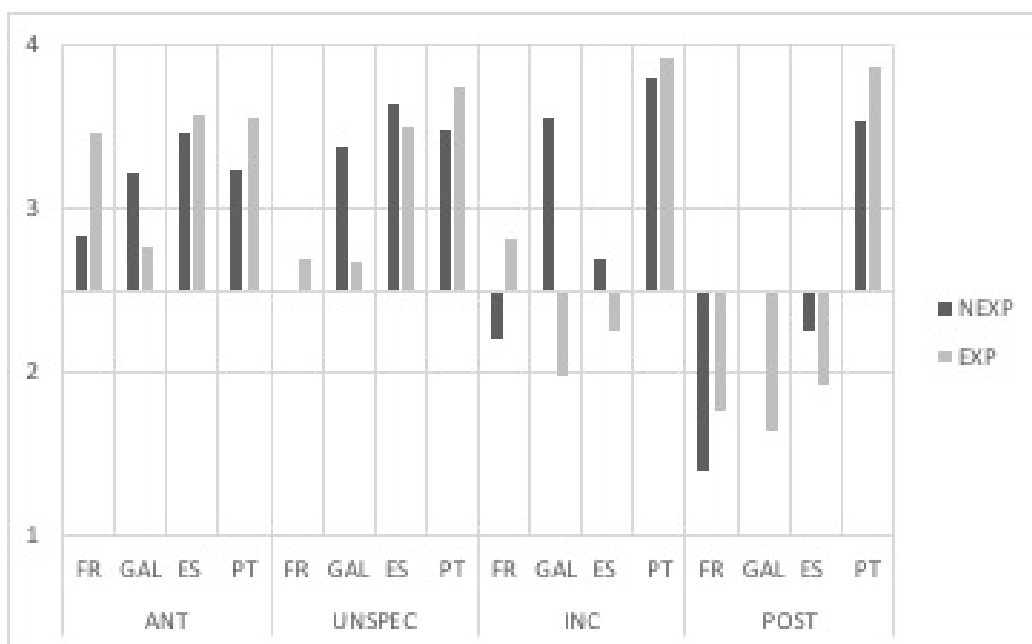
Figure 4: Acceptability of compound gerund with embedded co-referent null subject by groups with (EXP) and without explicit linguistic formation (NEXP)

The CG with embedded overt subject

The acceptability of the CG with an embedded overt subject is represented in Figure 5. As predicted, we find again that the Portuguese group accepts all four temporal interpretations. The tendency observed in the previous section of the higher acceptance values in the non-anteriority CG

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[45]It is beyond the scope of this study to analyze the influence of this and other extra-linguistic factors.

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as opposed to the anteriority CG is even stronger if the subject of the gerund clause is overt. In these cases, we observe that the acceptance values for the non-anteriority CG are nearly identical at around 3.56, whereas the anteriority CG clearly exhibits a lower acceptance with 2.91.
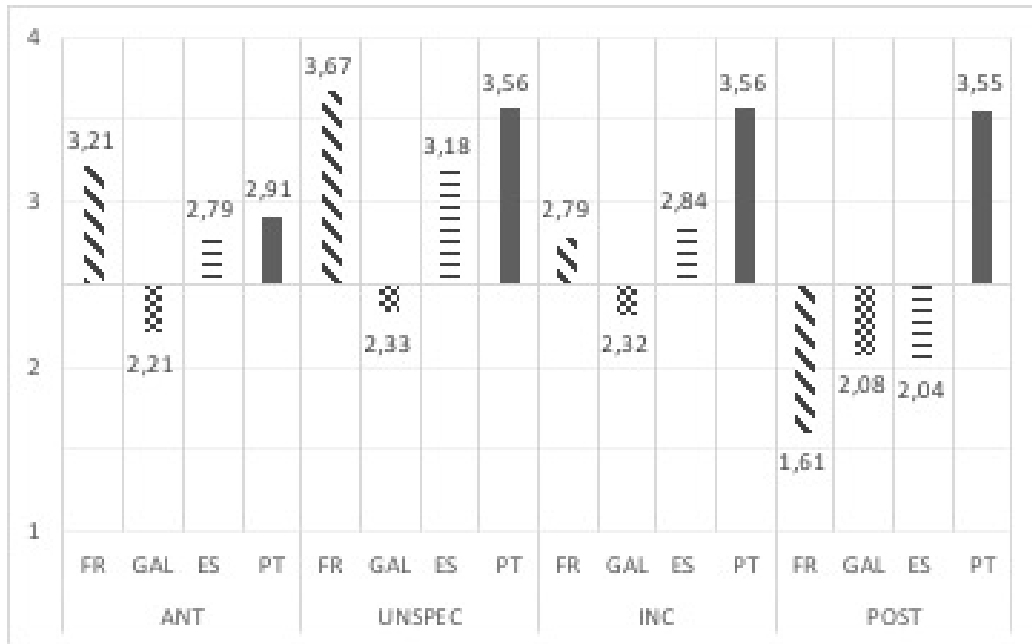
Figure 5: Acceptability of compound gerund with embedded overt subject

Again, the Wilcoxon Rank Sum Test was applied to compare the French, Galician and Spanish groups with the Portuguese control group. As for the **anteriority CG**, there are no statistically significant differences between the Portuguese control group (mean=2.91) and the French (mean=3.21) or the Spanish (mean=2.79) groups (W=391, p=.098 and W=520, p=.668, respectively). We do, however, find a significant difference with the Galician group (mean=2.21, W=1025, p=.002). As for the **temporally unspecified CG**, we find the same pattern; the French (mean=3.67) and the Spanish (mean=3.18) groups show no statistically significant differences from the Portuguese control group (mean=3.56; W=697, p=.601 and W=714, p=.051, respectively), whereas the Galician group (mean=2.33) shows a significant difference (W=1402, p<.001).

As for the **posteriority CG**, we find that the French, Galician and Spanish groups consider it clearly ungrammatical (acceptance values between 1.61 and 2.08), as opposed to the Portuguese group (3.55).

As for the **inclusion CG**, we find statistically significant differences between the Portuguese control group (mean=3.56), on the one hand, and

the French group (mean=2.79), the Galician group (mean=2.32) and the Spanish group (mean=2.84), on the other hand (W=809, p=.002; W=1430, p<.001; W=741, p=.001; respectively). However, it is noteworthy that despite this significant difference from the Portuguese group, the Galician group shows an acceptance value below 2.5, thus a tendency towards regarding it as ungrammatical, whereas the French and the Spanish groups show values above 2.5, thus a tendency towards regarding it as grammatical. If compared to the data in the previous section, we observe also that the acceptance values of the temporally unspecified CG and the inclusion CG in the French group rise if the embedded subject is overt (2.55 to 3.67 and 2.42 to 2.79, respectively). Furthermore, we find that with an embedded overt subject the Galician group presents results below 2.5 for all four temporal interpretations.
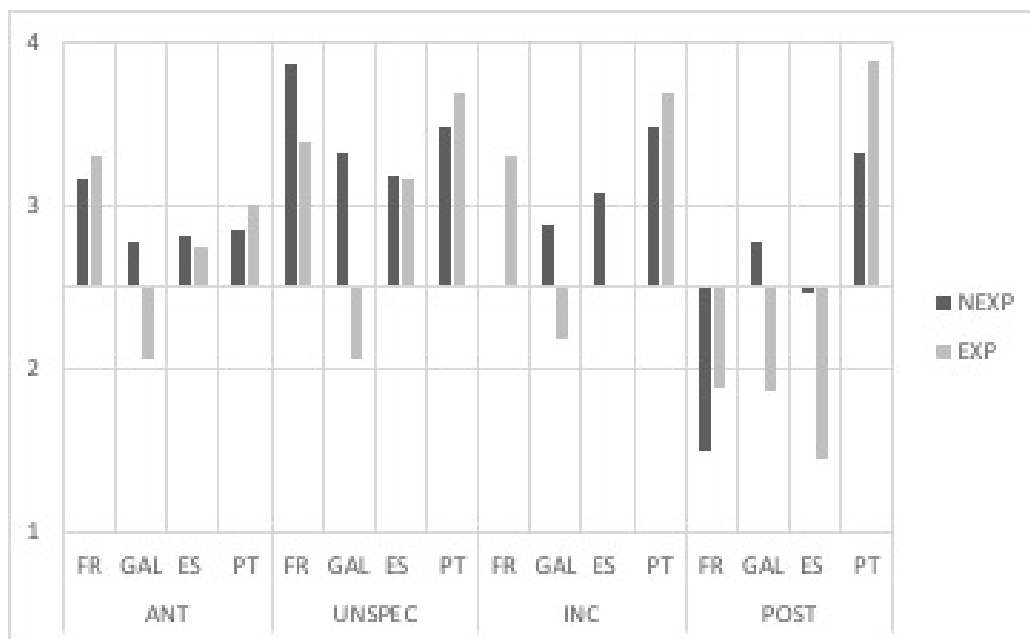
Figure 6: Acceptability of compound gerund with embedded overt subject by groups with (EXP) and without explicit linguistic formation (NEXP)

Again, however, the explicit linguistic knowledge of the informants (mainly in the Galician group) seems to play a crucial role. Figure 6 represents the acceptance values for each language group divided into the relevant subgroups. We observe that the Galician informants with explicit linguistic knowledge (EXP) exhibit consistent results below 2.5. The informants without explicit linguistic knowledge (NEXP), on the other hand, show acceptance values much more similar to their Spanish-speaking coun-

terparts, i.e. they accept the anteriority CG (mean=2.78), the temporally unspecified CG (mean=3.33) and the inclusion CG (mean=2.88). Furthermore, they are the only subgroup that presents an acceptance value above 2.5 for the posteriority CG (mean=2.78). As for the Spanish and the French groups, we observe the same patterns as in the previous section with an embedded null subject. In the case of the temporally unspecified CG, explicit linguistic knowledge seems to play no role, whereas in the case of the inclusion and posteriority CG it does. In the Spanish group, the subgroup without explicit linguistic knowledge presents higher acceptance values. In the French group, this effect is reversed and the subgroup with explicit knowledge exhibits higher acceptance values.

6.4.2 The substitutability by the simple gerund

In this section, we will compare the acceptability of the simple gerund and the compound gerund in the exact same contexts (i.e. as semantically equivalent variants). As discussed in section 2.4, the free alternation between the two forms without effects on the interpretation is one of the characteristics of the Portuguese non-anteriority CG, as opposed to the anteriority CG.

The SG with embedded co-referent null subject

Figure 7 shows a comparison of the mean acceptance values of the CG (darker shade) and the SG (lighter shade). We find that the results of the Portuguese control group confirm the findings in the literature. The Wilcoxon signed-rank test for paired data (Field 2009: 552) shows that in the Portuguese group the acceptance values of the non-anteriority CG and SG do not present significant differences: temporally unspecified relations (V=34, p=.439), inclusion (V=15, p=.374), posteriority (V=36, p=.095). In the case of the **anteriority SG**, on the other hand, the SG (mean=2.46) shows a significantly lower acceptance value than the CG (mean=3.37, V=14, p<.001). Interestingly though, the acceptance value of the SG in this case (2.46) is almost at chance level and not clearly unacceptable, as one might expect. This behavior of Portuguese distinguishes it from the other languages under study, in the sense that French (mean=1.5), Galician (mean=2.0) and Spanish (mean=2.0) clearly reject the anteriority SG.

In the case of the **non-anteriority SG** the three languages pattern with the Portuguese control group, in that they all present results above 3 (except the French group in temporally unspecified context with 2.97). Furthermore, it can be observed that both the Spanish and the Portuguese

groups show a slight preference for the CG over the SG in the case of temporally unspecified relations. The results of this test lead, therefore, to the conclusion that French, Galician and Spanish allow for the non-anteriority SG with embedded null subject.
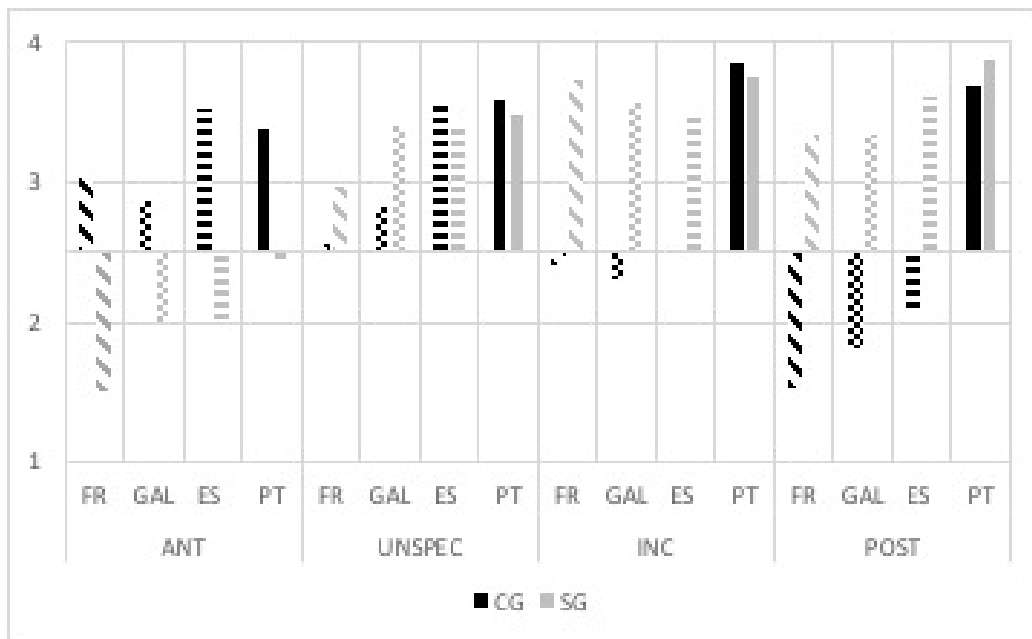
Figure 7: Acceptability of the simple and the compound gerund with embedded co-referent null subject

The SG with embedded overt subject

As opposed to the SG with embedded null subject, the picture is much more complex when the embedded subject is lexically realized and disjoint. The Portuguese control group maintains its rejection of the SG in anteriority contexts and its acceptance in non-anteriority contexts. However, in the case of temporal inclusion the CG (mean=3.56) displays a significantly higher acceptance value than the SG (mean=3,05, V=33, p=.006). The same happens in the case of the posteriority CG (mean=3.55) with regard to the posteriority SG (mean=3.1, V=6, p=.001). It is only in the case of temporally unspecified relations that there seems to be no significant preference for the CG (mean=3.56) or the SG (mean=3.44, V=16, p=.243).

With regard to the other three languages under study, we find several interesting results. First of all, we observe that the French group is the only

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one which accepts the SG in anteriority contexts (mean=3.1), with no significant difference to the CG (mean=3.21, V=60, p=.433). Furthermore, in the case of temporally unspecified relations, the French group shows a significant preference for the CG (mean=3.67) over the SG (mean=3.06, V=19, p<.001), as opposed to the case of temporally unspecified relations with embedded null subject where the SG is clearly preferred. The acceptance of the inclusion SG with overt subject drops to 2.67 which is significantly different from the value of its null subject counterpart (mean=3.67).These findings suggest that the acceptance of certain temporal interpretations of both the SG and the CG in French might be influenced by the presence or absence of an overt subject.
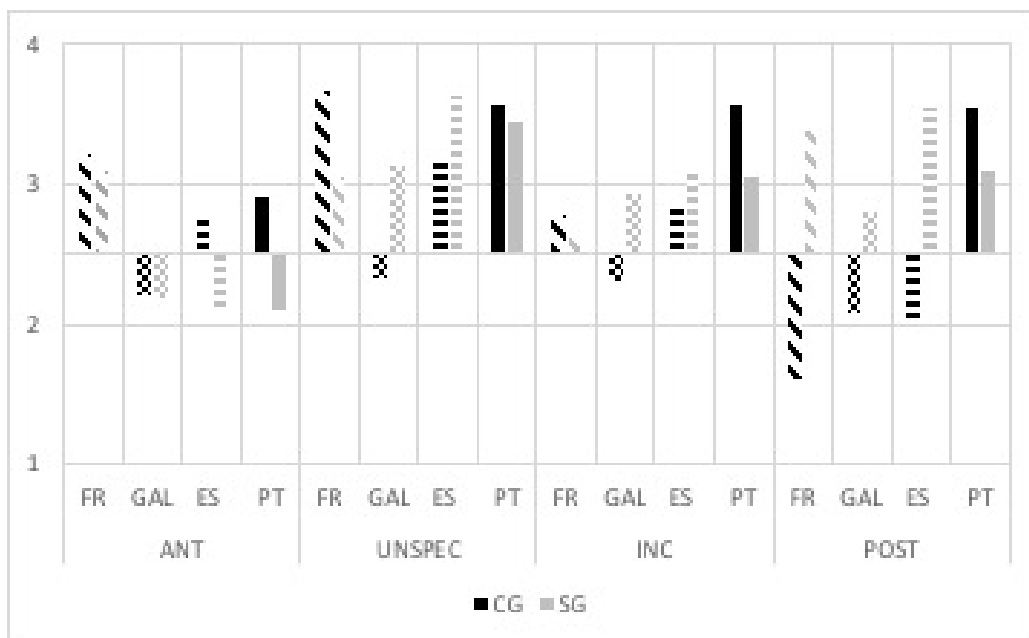
Figure 8: Acceptability of the simple and the compound gerund with embedded overt subject

As for the Iberian languages under study, the Spanish (mean=2.09) and the Galician (mean=2.19) groups do not differ significantly from the Portuguese control group (mean=2.1) in their rejection of the SG in anteriority contexts (W=361, p=.701 and W=568, p=.947, respectively). In the Galician group, we find furthermore significantly lower acceptance values for the SG with overt subject in the gerund clause as compared to their counterparts with embedded null subjects. This confirms the findings described above concerning the acceptability of the CG with lexically realized subject, and seems to indicate that Galician gerund clauses with overt subjects

are less acceptable, independently of whether the gerund appears in the simple or in the compound form. In the Spanish group, on the other hand, the acceptance values of the non-anteriority remain above 3 in all three cases.

6.5 Discussion

In the previous sections, we have seen that Portuguese seems to be an exception with regard to the possible interpretations of the CG. As opposed to the other three Romance languages under study, Portuguese allows for all four temporal interpretations, both with embedded null subject and with lexically realized subject, confirming **H0a**. The fact that the anteriority CG exhibits the lowest acceptance values is in line with Leal's (2001: 85) observation that the anteriority CG occurs preferably on the left side of the main clause, and not on the right (in the tested sentences the gerund clause always appeared on the right).

As for the substitutability of the simple and compound form of the gerund, the Portuguese control group does not present a homogeneous picture. If the embedded subject is null and co-referent with the main clause subject, there are in fact no significant differences in the acceptance values of the CG and the SG. However, if the embedded subject is lexically realized, we find significant differences in the acceptance of the two forms in the case of the temporal inclusion and posteriority, in the sense that the compound form is, in fact, preferred over the simple form. **H0b** is therefore only partially confirmed.

The other Romance languages, on the other hand, are far from presenting a homogeneous behavior. As predicted in **H1a**, all of them seem to allow the anteriority CG (with the exception of the Galician informants with explicit linguistic knowledge who disallow all CG with lexically realized subjects). As predicted in **H1b** there are no significant differences between the four groups in the acceptance of the anteriority CG with embedded null subject. However, if the embedded subject is lexically realized, we find significant difference between the Galician group, on the one hand, and the Spanish, French and Portuguese group on the other hand. As mentioned above, the rejection of the anteriority CG in this case, is more likely to be related to the general rejection of overt subjects in the gerund clause by speakers with explicit linguistic knowledge. The Galician group without explicit linguistic knowledge presents acceptance values similar to those of the other three groups. I will therefore consider H1b to be confirmed as well.

The acceptability of the non-anteriority CG, however, is much fuzzier. The Spanish monolingual group presents a behavior similar to the Portuguese group, in that they accept the temporally unspecified CG without restrictions. The French and the Galician groups, on the other hand, both seem to accept it with certain restrictions on the embedded subject. **H2a** is thus confirmed, in the sense that the temporally unspecified CG is indeed the most acceptable of the three non-anteriority CG, both with embedded null subject and lexically realized subject. As for **H2b**, we found that only the Spanish group presents acceptance values which are similarly high to those the Portuguese control group. Both the French and the Galician group exhibit certain restrictions with respect to the acceptance of the temporally unspecified CG, particularly in the cases with an embedded overt subject. While the French group only accepts it with a lexically realized subject in the embedded clause, the opposite is true for the Galician group, which rejects all CG clauses with embedded overt subject. However, our data suggests that there are extralinguistic factors at play, such as explicit linguistic knowledge, as mentioned above. While the Galician informants with explicit linguistic knowledge strongly reject all gerund clauses with embedded overt subjects, we have seen that informants with no such knowledge readily accept those constructions and present results similar to those of the Spanish group. H2b is thus only partially confirmed.

Furthermore, we observe that all three groups disallow the posteriority CG, with acceptance values clearly below chance level, both with embedded null subject and lexically realized subject. These results contrast with the findings of the previously mentioned corpus data, as well as with the findings in Cuervo (1907) for Bogotan Spanish. This opens up the question as to whether there is a dialectal divide in Spanish in the acceptance of the different types of non-anteriority CG. This subject might an interesting topic for further research.

As for the inclusion CG, the results were the least conclusive and the data suggests that the acceptability of this temporal interpretation is influenced by other factors, i.e. the explicit linguistic knowledge of the informants. The findings of this study show a need for further sociolinguistic studies in order to determine the effects of extra-linguistic variables on this phenomenon in the different languages under study. Another factor at play in the case of the inclusion CG might be the discourse relation itself (Elaboration or Background).

The acceptability of the CG with the different temporal relations in the four languages under study is summarized in Table 7.

As for the substitutability of the simple and compound form of the gerund in French, Galician, and Spanish, we find again very heterogeneous

Subject	ANT null	ANT overt	UNSPEC null	UNSPEC overt	INC null	INC overt	POST null	POST overt
FR	✓	✓	?	✓	?	✓		
GAL	✓	?	✓	?	?	?		?
ES	✓	✓	✓	✓	?	✓		
PT	✓	✓	✓	✓	✓	✓	✓	✓

Table 7: Acceptance of the CG according to the exploratory acceptability judgment test

results. Due to the fact, that there are very few instances of acceptable non-anteriority CG in these three groups, we have few cases to compare the acceptance values. However, the general picture seems to be that, when the non-anteriority CG is possible, there still seems to be a clear preference for either the simple or the compound form. **H3** is therefore not confirmed.

H0a: The Portuguese control group accepts the CG in all four temporal relations. ✓

H0b: The Portuguese control group exhibits similar acceptance values for the non-anteriority CG and SG. (✓)

H1a: All four groups accept the anteriority CG. ✓

H1b: The are no differences in the acceptance of the anteriority CG between the different groups. ✓

H2a: The acceptance of the temporally unspecified CG is higher than the acceptance of the inclusion and posteriority CG. ✓

H2b: The temporally unspecified CG exhibits a tendency towards acceptance in all four groups. (✓)

H3: Whenever the non-anteriority CG is allowed in the French, Galician and Spanish groups, they present similar acceptance values for the simple and the compound gerund. **X**

Chapter 7

Conclusions

The topic of this dissertation was the analysis of the different temporal interpretations of the CG. Contrary to what has been described in traditional grammars both in Portuguese (e.g. Cunha and Cintra 1987) and in other Romance languages (e.g. Fabra 1956; Chevalier et al. 1992; Álvarez et al. 1995; Fernández Lagunilla 1999), the compound form can be used to express other temporal values besides anteriority to the situation described by the main clause.

7.1 Part I - the compound gerund in Portuguese

The first part of this study was dedicated to the CG in European Portuguese. In this language, we find a particularly wide range of possible temporal interpretations (in connection with different discourse relations), namely anteriority, posteriority, temporal inclusion, as well as unspecified temporal orderings. However, the occurrence of these temporal values is not free. In Section 2.4, the anteriority CG and the non-anteriority CG were compared, and a clear asymmetry between the two became obvious. Whereas the anteriority CG can occur both sentence-initially and sentence-finally, and with no particular constraints regarding the main clause verb tense, the occurrence of the non-anteriority CG, on the other hand, is more restricted: it can only occur in sentence-final position and shows certain co-occurrence restrictions with respect to the verb form of the clause it is adjoined to (namely, it can only co-occur with finite past tenses or adjoined to embedded compound infinitives). Furthermore, the non-anteriority CG presents the peculiarity that it can frequently be substituted, without semantic effects, by the SG. The same is not true for the anteriority CG, where the substitution by the simple form (if/when possible) changes the

semantics, namely the temporal ordering, of the sentence.

These properties have already been described in the more recent literature on the gerund in Portuguese (see for example Leal 2001; Móia and Viotti 2004, 2005; Lobo 2006, 2013; Cunha et al. 2008). However, there has been no research dedicated to explaining the observed asymmetry. Most accounts in the literature remain largely descriptive, or implicitly assume a morphological analysis. Cunha et al. (2008), for example, state that the sentence-final CG is unique in being able to express anteriority either to the utterance time or to the situation described by the main clause. In Section 2.5, however, I have shown that this affirmation is not necessarily true; in prospective scenarios, exemplified in (44) (prediction uttered by a witch), the CG expresses a situation that is neither anterior to the utterance time, nor to the situation described by the clause to which it is adjoined. Lobo (2006), on the other hand, argues that the peripheral gerund clauses in sentence-final position allow for a special behavior and that their temporal interpretation is determined by non-syntactic (e.g. semantic or pragmatic) factors. In the same line, Zwart (p.c.) has argued that the asymmetry with regard to the position (sentence-initial or –final) might be due to pragmatic restrictions regarding the natural ordering of situations. This might be true for the posteriority CG; however, as discussed in Section 2.5, the asymmetry of the anteriority and, for example, temporal inclusion CG cannot be explained by pragmatic factors. Throughout Chapter 2, I hope to have shown that the non-anteriority is an intriguing and understudied phenomenon, which has not been satisfactorily explained so far. The goal of this dissertation was to propose a syntactical analysis of the non-anteriority CG that accounts for the observed asymmetry and its particular behavior.

In many Germanic languages, we find a structure that shares some of the properties of the non-anteriority CG, namely the constructions called "parasitic participles". This term designates participles which occur in syntactic contexts where an infinitive would be expected (e.g. complement of modal verbs). Among the various Germanic languages, there are different types of parasitic participles, depending on factors such as the head directionality of the language, the V2 property and verb movement in general. However, what all parasitic participles have in common are the following properties: (i) they can only occur under c-command of a specific head, (ii) this head must contain a certain feature ([+PERF] following Wurmbrand 2012), and (iii) they present the same interpretation as, and can alternate freely with, the infinitive. Wurmbrand (2012) proposes a unified analysis of the parasitic participles in Germanic languages, and argues that they occur due to the need to value unspecified temporal features on the verbal

head in Upward Agree. Despite the differences between the parasitic participles and the non-anteriority CG, discussed in section 3.3, there seem to be some parallels between the two phenomena. A syntactic analysis of the Portuguese non-anteriority CG inspired by that of the Germanic parasitic participles seemed therefore promising.

In Chapter 4, I therefore argued for a similar approach, in order to explain the particularities of the non-anteriority CG. Assuming Rooryck's theory of variable and invariable feature underspecification (1994), I contended that the non-anteriority CG arises as a result of the valuation of underspecified temporal features on the gerund T head. In gerund clauses, the V-T complex raises to C (see Lobo 2006), in order to value these features. The C head is generally assumed to link the clause to the larger structure (see Ritter and Wiltschko 2014), and therefore it is plausible to assume that the temporal ordering that follows from the discourse relation between the situations described by the main and the gerund clauses is codified in C. If the discourse relation is one of anteriority, C therefore contains a [+ ANT] feature. When the V-T complex raises to C, T values its underspecified temporal features for [+ ANT], which licenses the occurrence of the CG. In this case, all the relevant features for the occurrence of the compound form are contained within the gerund CP. This explains why the anteriority CG can occur both in sentence-initial and in sentence-final position and why it is independent of the main clause verb form.

In the case of the non-anteriority CG, on the other hand, I have argued that the C head lacks the relevant feature to value the underspecified temporal features of the gerund T head. For this reason, the T head needs to probe higher up the structure in Upward Agree until it finds a Goal with matching features. If the gerund clause is adjoined below the main clause TP, the matrix T head becomes this Goal. This explains, on the one hand, the dependence of the non-anteriority CG on the T head of the clause it is adjoined to; it can only appear if this T head is valued for [+ ANT], otherwise the SG would appear. On the other hand, this also explains why the non-anteriority CG can only occur in sentence-final position; in order to fulfill the c-command condition, it needs to be merged below TP, and this is only possible through an adjunction on the right side, because otherwise the gerund clause would intervene in the raising of the matrix subject to SpecTP and of the matrix V to T. The reason why the anteriority CG cannot be substituted by the simple form, whereas the non-anteriority CG often can, also becomes apparent from this analysis. In case of the former, the feature that licenses the occurrence of the compound is the one codifying the discourse relation; the compound form therefore carries semantic information that is relevant to the interpretation of the link between the two

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clauses. In the case of the non-anteriority CG, on the other hand, the feature responsible for the occurrence does not codify the discourse relation, but rather the tense of the main clause verb. As a matter of fact, the occurrence of the CG is, I assume, merely the result of a structural necessity to value/check underspecified temporal features. Therefore, the compound form does not carry semantic information that is relevant to the interpretation of the semantic link between the two clauses. The free alternation with the SG is due to the fact that the Portuguese functional inventory contains a fully specified version of the non-anteriority C head (which is valued as [- ANT] and gives rise to the simple form) and with a more defective version of this head, that lacks specification for the relevant feature (which is valued as [0 ANT], and gives rise to the compound form).

This analysis crucially relies on the notion of Upward Agree. In Section 4.2, the Standard version of Agree, as proposed by Chomsky (2000, 2001), and its limitations were presented. Furthermore, four more recent proposals that aim to solve some of the problems of the standard version of Agree were briefly discussed, namely those by Pesetsky and Torrego (2007), Bošković (2007), Wurmbrand (2012) and Zeijlstra (2012). There are several issues with the Downward versions of Agree (Chomsky 2000, 2001; Pesetsky and Torrego 2007; Bošković 2007), that the Upward versions (Wurmbrand 2012; Zeijlstra 2012) manage to explain. It is beyond the scope of this dissertation to discuss all the advantages and problems of the different analyses, but I hope to have shown that there is convincing evidence in the literature that, at least in certain cases, Agree can take place in an upward direction.

Concluding Part I of this dissertation, the advantages and problems of the proposed syntactical analysis of the non-anteriority CG were discussed. The problems concern mainly the proposed separation of Portuguese adjunct gerund clauses into integrated and peripheral ones (see for example Lobo 2006, 2013; Oliveira 2013). In the literature, gerund clauses with the compound form have been considered to be peripheral gerund clauses, i.e. adjoined to a higher projection (to TP or CP, according to Lobo 2006). However, an adjunction above T would be incompatible with the syntactic analysis proposed here, since in that case there would be no c-command between the matrix and the gerund T heads. Lobo (2006) presents a series of internal and external properties to justify the distinction between integrated and peripheral gerund clauses. However, in Section 4.3.2, I have discussed how most of these properties can be explained by independent factors, i.e. factors that do no affect the syntactic analysis proposed above. There remain still some constructions that require further research, such as the incompatibility of the non-anteriority CG with cleft-

constructions or alternative interrogatives. However, I have argued that, in fact, some of these incompatibilities follow naturally from the syntactic analysis proposed in this dissertation. The advantage of the syntactic analysis is that it neatly accounts for the observed asymmetry between the anteriority and the non-anteriority CG, and that it captures and explains all its possible occurrences, as opposed to previous morphological analyses. Furthermore, the syntactic analysis makes a prediction on the availability of the non-anteriority CG in other languages: if the analysis based on feature underspecification in the gerund C head is correct, we would expect that the non-anteriority CG is most readily available in discourse relations that do not specify the temporal ordering of the two situations. This hypothesis was tested in Part II.

7.2   Part II - Evidence from other Romance languages

Part II of this dissertation was dedicated to a cross-linguistic comparison of the non-anteriority CG. In Chapter 5, the literature on the CG in Catalan, French, Galician, and Spanish was reviewed. In all the consulted literature, there was either no mention of the non-anteriority CG, or an explicit statement that the compound form can only express anteriority. The only exception was Cuervo's critique of the Bogotan variety of Spanish of the 19th century (1907: 195), where the author mentions the use of the posteriority CG, and states that this use is incorrect, but frequently found in journals and badly written texts (ibid.). Furthermore, a corpus search for French, Galician and Spanish yielded several occurrences of the non-anteriority CG. This begs the question of whether the consulted literature provides an incomplete picture of the whole range of possible temporal interpretations of the CG in the different languages.

For this reason, an exploratory acceptability judgment test was created for French, Galician, Spanish, as well as for Portuguese (as control group). The test consisted of a series of sentences with adjunct gerund clauses, both with the simple and the compound form, with the aim of eliciting all four temporal relations available in Portuguese (anteriority, posteriority, inclusion and temporally unspecified discourse relations). Furthermore, there were sentences both with an overt subject in the gerund clause, as well as with an embedded null subject (co-referent with the matrix subject). Participants were asked to judge the acceptability of every sentence on a Likert scale from 1 to 4, where 1 represents "completely bad" and 4

"completely good". Informants were also asked to indicate their temporal interpretation of the two situations described in the sentence, in order to be able to exclude acceptance values due to unintended temporal interpretations. At the beginning of the test, the following sociolinguistic information was collected: age, region where the participant grew up, potential bilingualism, and explicit linguistic knowledge.

Besides the prediction of the syntactic analysis mentioned in the previous section (that the non-anteriority CG expressing temporally unspecified discourse relations should be readily available in all Romance languages), this exploratory test was also used to confirm (and put forward) some other hypotheses. To the best of my knowledge, the properties described in the literature concerning the non-anteriority CG in Portuguese were derived either from corpus data or from internal grammaticality judgments of the author(s), but so far there has never been an experimental exploration of these properties. Furthermore, so far there has been no research on the free variation between the simple and the compound gerund in non-anteriority contexts. The present test, therefore, served also to confirm that, as a matter of fact, all four temporal relations are grammatical in Portuguese, and to provide empirical data on the substitutability of the simple and the compound form in non-anteriority contexts.

In total, 217 informants participated in the four tests. Some informants had to be excluded in order to maintain homogeneous subgroups and avoid the interference of other factors (such as bilingualism, other dialectal varieties, etc.), leaving 148 informants for detailed analysis. In order to distinguish statistically significant differences from random variation, the Wilcoxon rank-sum test and the Wilcoxon signed-rank test for paired data were applied (Field 2009).

The analysis showed that, as predicted in the literature, the Portuguese control group accepts all four temporal interpretations, without significant differences. Furthermore, in all non-anteriority contexts tested both the simple and the compound form were accepted, whereas in anteriority contexts only the compound form was accepted. However, in some non-anteriority contexts, the Portuguese informants actually showed a preference for the compound form. This calls for further investigation, since - at least in non-posteriority non-anteriority contexts - free variation SG/CG may not always exist.

Quite significantly, the prediction made by the syntactic analysis proposed in this dissertation (all four groups should accept the CG expressing temporally unspecified discourse relations) was borne out. The only instances where the temporally unspecified CG was rejected was in the Galician group when the subject of the gerund clause was lexically real-

ized. However, the Galician group rejected all sentences with embedded overt subject, both with simple and with compound gerund. This rejection might therefore be related to the impossibility of nominative case licensing, and not with the non-anteriority CG itself. Regarding the inclusion and the posteriority CG, there were significant differences between the groups, often influenced by the presence or absence of an overt subject and/or by the explicit linguistic knowledge of the informants. However, the limited data of this exploratory judgment test does not allow to draw any conclusions on the exact effects of these factors. Further and more targeted research will be necessary to determine the influence of other variables in the acceptance of the non-anteriority CG.

Overall, Part II showed that, contrary to the descriptions in the literature, other Romance languages do, in fact, allow for some types of non-anteriority CG. The fact that all the languages under study accept the CG expressing temporally unspecified discourse relations adds to the plausibility of the syntactic analysis proposed in Part I.

7.3   Open questions and future research

To conclude, the findings of this dissertation open up a series of promising paths for future research. Some of the questions raised by this study will be briefly discussed in this section.

The first question arises from the difference between Portuguese, on the one hand, and Galician, Spanish and French, on the other hand. In particular, the clearly distinct acceptance of the non-anteriority CG in Portuguese and Galician is surprising, to say the least. This begs the question of whether the non-anteriority CG is a new structure that recently appeared in Portuguese, or whether it is an older structure that was partially lost over time in the other Romance varieties. A diachronic comparison of Portuguese and Spanish regarding the available temporal interpretations of the CG might be a particularly fruitful topic. Brunet Ros (2016: 36) shows that, contrary to Modern Spanish, in Old and Classic Spanish, the subject used to be interpolated between the the auxiliary verb and the past participle in the CG (just as in Modern European Portuguese). This change of the subject position and its possible effect on the temporal interpretation of the CG in Spanish could help provide an answer to the question of whether the non-anteriority CG is a recent phenomenon in Portuguese or an older phenomenon that got lost in Spanish. With regard to Galician, there seems to be at least one possible answer to explain its behavior with regard to the non-anteriority CG: in Portuguese, and the

other Romance languages, the CG is a very marked phenomenon, which occurs mainly in written and/or formal speech. The fact that the written tradition of Galician was interrupted by several decades of censorship might explain why in modern-day Galician this very formal structure has become less acceptable. Research on the Galician written tradition before the dictatorship in Spain might provide some answers on this topic.

Furthermore, in the case of Spanish, I have only considered data from informants who grew up in Spain. However, it seems likely that the dialectal variety of the speakers strongly influences the acceptance of the non-anteriority CG, in particular, in Latin-American varieties. Batllori et al. (2017) have shown that, in the variety spoken in Ecuador, the simple gerund has acquired new temporal values, probably due to contact with local languages. Applying the acceptability judgment test developed for this dissertation to Latin-American varieties of Spanish, and comparing the results with the Iberian group could reveal interesting differences. The descriptions of the variety from Bogotá provided by Cuervo (1907) point in the direction of at least some Latin-American varieties of the 19th century allowing even the posteriority CG, which is impossible in modern-day Iberian Spanish. This would be in line with the corpus data discussed in Section 5.4, where we found a series of occurrences of the posteriority CG in the Latin-American subcorpora.

As discussed in Chapter 6, the exploratory acceptability judgment test carried out for this dissertation gave us an overall picture; however the findings were sometimes rather inconclusive. This indicates that there are several other variables at play in the acceptability of the non-anteriority CG. Interestingly, in different languages the same variable (e.g. explicit linguistic knowledge) can have opposite effects. A detailed sociolinguistic study is necessary in order to determine the effect of sociolinguistic or other extra-linguistic factors. Furthermore, the presence or absence of an overt subject in the gerund clause has proven to be an important factor influencing the acceptance values of the non-anteriority CG. However, again, this variable seems to have opposite effects in different languages. A more detailed study of the combination of different types of subjects (expletives, null subjects, pronouns, DPs, etc.) could shed some light on whether the differences found in this study are due to syntactic, to pragmatic and/or to processing restrictions.

In this exploratory judgment test, the focus lay on the temporal relation between the situations described by the matrix and the gerund clauses. However, the question of whether the discourse relation (e.g. Narration vs. Result, Elaboration vs. Background) plays a more central (and decisive) role remains open. The results of the temporal inclusion CG were par-

ticularly inconclusive, with acceptance values often around chance level. This indicates the necessity to further investigate the different types of overlapping relations (i.e. temporal inclusion, total vs. partial overlapping), and the possible relevance of mereological features in the acceptance of the non-anteriority CG.

Another question arises from the additional data collected in the exploratory acceptability judgment test. For the purposes of this dissertation, I have only analyzed the data of monolingual speakers, to avoid the interference of other factors. However, in the collected data set, there is a substantial amount of bilingual speakers (mainly French-Arabic and Spanish-Galician/Catalan). An analysis of this data could shed some light on the effect of bilingualism, and more precisely on the effects of typologically different L1s (such as Arabic) or closely related second L1s (such as Catalan or Galician).

This leads us to the field of L2 acquisition. The wide range of possible temporal interpretations of the Portuguese CG yields an intriguing question about whether L2 speakers of Portuguese end up acquiring all the temporal values of the CG, and if so, when and how. The non-anteriority values of the CG are not explicitly taught in Portuguese as L2 courses (López in preparation); therefore, this topic seems to be particularly fitting to study the natural acquisition of complex structures without the interference of explicit teaching.

Finally, in order to test the adequacy of the presented analysis, it might also be fruitful to broaden the picture and consider other, non-Romance languages, that possess structures similar to the CG in Romance. An example is the case of English. To the best of my knowledge, there has been no research specifically on the non-anteriority CG (having + past participle). However, we find examples that seem to indicate that some kinds of non-anteriority CG are also possible in this language. The sentence in (92) seems to express the discourse relation Result, and would therefore be a case of the posteriority CG. A detailed study of this phenomenon and its licensing conditions in other language families might provide interesting insights into how temporal relations are codified and transmitted in the syntactic structure.

(92)   The Dothraki feared their great power, having left them in peace. [46]

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[46]Source: Podcast Radio Westeros, Episode 39, 42min 40sec, available under: https://youtu.be/jiJ9luZjExg

Bibliography

Álvarez, R., X. L. Regueira Fernández, and H. Monteagudo (Eds.) (1995). *Gramática Galega*. Vigo: Editorial Galaxia, S.A.

Álvarez, R. and X. Xove (2002). *Gramática da Lingua Galega*. Vigo: Editorial Galaxia, S.A.

Alves, A. T. (2002). *Sobre a localização temporal adverbial anafórica em português*. Ph. D. thesis, Universidade dos Açores.

Asher, N. and A. Lascarides (2005). *Logics of conversation* (Digitally printed 1. paperback version ed.). Studies in natural language processing. Cambridge: Cambridge University Press.

Baker, M. C. (2008). *The Syntax of Agreement and Concord (Cambridge Studies in Linguistics)*. Cambridge: Cambridge University Press.

Batllori, M., M.-L. Hernanz, and C. Rubio (2017). La variació sintàctica: els gerundis d'anterioritat a l'espanyol equatorià. In *Seminari del Centre de Lingüística Teòrica de la Universitat Autònoma de Barcelona (27/10/2017)*, Bellaterra, Spain.

Bjorkman, B. and H. Zeijlstra (to appear). Upward Agree is superior. *Linguistic Inquiry*.

Boeckx, C. (2006). *Linguistic Minimalism: Origins, Concepts, Methods, and Aims (Oxford Linguistics)*. Oxford University Press.

Bošković, Ž. (2007). On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry 38*(4), pp. 589–644.

Brunet Ros, N. (2016). Construcciones de gerundio con sujeto expreso: del castellano medieval a la lengua actual. MA thesis, Universitat de Girona.

Campos, O. A. d. S. (1980). *O gerúndio no Português. Estudo Histórico-Descritivo*. Rio de Janeiro: Presença.

Centro Ramón Piñeiro para a investigación en humanidades (2017). *Corpus de Referencia do Galego Actual* (CORGA) [3.0].

Chevalier, J.-C., C. Blanche-Benveniste, M. Arrivé, and J. Peytard (Eds.) (1992). *Grammaire du Français Contemporain*. Editions Larousse.

Chomsky, N. (2000). Minimalist inquiries: The framework. In R. Martin, D. Michaels, and J. Uriagereka (Eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, Cambridge, Massachusetts: The MIT Press, pp. 89–155.

Chomsky, N. (2001). Derivation by phase. In M. J. Kenstowicz (Ed.), *Ken Hale: A Life in Language (Current Studies in Linguistics)*, Cambridge, Massachusetts: The MIT Press, pp. 1–54.

Cuervo, R. J. (1907). *Apuntaciónes críticas sobre el lenguaje bogotano* (fifth ed.). Paris: A. & R, Roger Y F. Chernoviz.

Cunha, C. and L. F. L. Cintra (1987). *Nova gramática do português contemporâneo* (4a. ed.). Lisboa: Edições António Sá da Fronteira.

Cunha, L. F., A. Leal, and P. Silvano (2008). Relações retóricas e temporais em construções gerundivas adverbiais. In F. Oliveira and I. Duarte (Eds.), *O fascínio da linguagem*, Porto: Universidade do Porto, pp. 265–276.

Dikken, M. d. and E. Hoekstra (1997). Parasitic participles. *Linguistics 35*(6), pp. 1057–1089.

Epstein, S. and D. Seely (2002). *Derivation and Explanation in the Minimalist Program*. Oxford: Blackwell Publishers.

Espunya, A. (2010). El significat dels predicats i els valors semàntics del gerundi postoracional. *Estudis Romànics 32*, pp. 73–100.

Fabra, P. (1956). *Gramàtica catalana*. Editorial Teide, S.A.

Fernández Lagunilla, M. (1999). Las construcciones de gerundio. In I. Bosque and V. Demonte (Eds.), *Gramática descriptiva de la lengua española*, Volume 2: Las construcciones sintácticas fundamentales. Relaciones temporales, aspectuales y modales, Espasa Libros, S.L., pp. 3443–3503.

Field, A. (2009). *Discovering Statistics Using SPSS (Introducing Statistical Methods Series)*. SAGE Publications Ltd.

Freixeiro, X. R. (2006). *Gramática da Lingua Galega*, Volume II - Morfosintaxe. Vigo: A Nosa Terra.

Gonçalves, A., A. L. Santos, and I. Duarte (2014). (Pseudo-)Inflected infinitives and Control as Agree. In *Selected Papers from 'Going Romance' Leuven 2012*, Amsterdam: John Benjamins, pp. 161–180.

Hiraiwa, K. (2001). Multiple Agree and the Defective Intervention Constraint in Japanese. In O. M. et al. (Ed.), *The Proceedings of the MIT-Harvard Joint Conference (HUMIT 2000)*, Cambridge, MA: MITWPL, pp. 67–80.

Horten, S. (2017). *Las variantes -ra y -se del pretérito imperfecto de subjuntivo: Un estudio de la variabilidad en la preferencia por las variantes-ra y-se realizado con hablantes nativos de Canarias y Chile*. MA thesis, UiT Norges Arktiske Universitet.

Institut d'Estudis Catalans (2016). *Gramàtica de la llengua catalana*. Barcelona: Institut d'Estudis Catalans.

Leal, A. (2001). *O valor temporal das orações gerundivas em português*. MA thesis, Universidade do Porto.

Lepre Pose, C. (2006). El gerundio de posterioridad. ¿un proceso de cambio? In M. Villayandre Llamazares (Ed.), *Actas del XXXV Simposio Internacional de la Sociedad Española de Lingüística*, León: Universidad de León, Dpt. de Filología Hispánica y Clásica, pp. 1060–1085.

Lobo, M. (2006). Dependências temporais: a sintaxe das orações subordinadas gerundivas do português. *Veredas* (10 (1-2)).

Lobo, M. (2013). Subordinação adverbial. In E. P. Raposo, M. F. Bacelar do Nascimento, A. Coelho da Mota, L. Seguro, and A. Mendes (Eds.), *Gramática do português*, Volume II, Lisbon: Fundação Calouste Gulbenkian, pp. 1981–2057.

Lobo, M. (2016). O gerúndio flexionado no português dialetal. In A. M. Martins and E. Carrilho (Eds.), *Manual de linguística portuguesa*, Manuals of Romance Linguistics, Berlin, Boston: De Gruyter, pp. 481–501.

López, V. (in preparation). L2 acquisition of the compound gerund in European Portuguese adjunct clauses.

Martins, A. M. (2000). Polarity items in Romance. Underspecification and lexical change. In S. Pintzuk, G. Tsoulas, and A. Warners (Eds.), *Diachronic Syntax. Models and Mechanisms*, Oxford: Oxford University Press, pp. 191–219.

Móia, T. and E. Viotti (2004). Differences and similarities between European and Brazilian Portuguese in the use of the «gerúndio». *Journal of Portuguese Linguistics* (3.1), pp. 111–139.

Móia, T. and E. Viotti (2005). Sobre a semântica das orações gerundivas adverbiais. In *Actas do XX Encontro Nacional da Associação Portuguesa de Linguística*, Lisbon: APL, pp. 715–729.

Oliveira, F. (2013). Tempo verbal. In E. P. Raposo, M. F. Bacelar do Nascimento, A. Coelho da Mota, L. Seguro, and A. Mendes (Eds.), *Gramática do português*, Volume I, Lisbon: Fundação Calouste Gulbenkian, pp. 509–553.

Peres, J. (1993). Towards an integrated view of the expression of time in Portuguese (first draft). In *Cadernos de Semântica*, Number 14. Lisbon: Faculdade de Letras da Universidade de Lisboa.

Pesetsky, D. and E. Torrego (2007). The syntax of valuation and the interpretability of features. In S. Karimi, V. Samiian, and W. K. Wilkins (Eds.), *Phrasal and Clausal Architecture*, Volume 101 of *Linguistik Aktuell/Linguistics Today*, Amsterdam: John Benjamins Publishing Company, pp. 262–294.

Real Academia de la Lengua Española (Ed.) (2009). *Nueva Gramática de la Lengua Española*, Volume II. Espasa Libros.

Real Academia de la Lengua Española [Data bank] (online). *Corpus de referencia del español actual* (CREA).

Ritter, E. and M. Wiltschko (2014). The composition of INFL. An exploration of tense, tenseless languages, and tenseless constructions. *Nat Lang Linguist Theory 32*, pp. 1331–1386.

Rocha, P. and D. Santos (2000). CETEMPúblico: Um corpus de grandes dimensões de linguagem jornalística portuguesa. In M. d. G. Volpe Nunes (Ed.), *Actas do V Encontro para o processamento computacional da língua portuguesa escrita e falada* (PROPOR'2000), Atibaia São Paulo, Brasil, 19-22/11/2000, pp. 131–140.

Rooryck, J. (1994). On two types of underspecification: Towards a feature theory shared by syntax and phonology. *Probus* (6), pp. 207–233.

Segura, L. and J. Saramago (2001). Variedades dialectais portuguesas. In *Caminhos do Português: Exposição Comemorativa do Ano Europeu das Línguas (Catálogo)*, Lisboa: Biblioteca Nacional, pp. 221–237.

Stechow, A. v. (2003). Feature deletion under semantic binding: Tense, person, and mood under verbal quantifiers. *North Eastern Linguistic Society (NELS)* (33), pp. 397–403.

Stechow, A. v. (2005). Semantisches und morphologisches Tempus: Zur temporalen Orientierung von Einstellungen und Modalen. *Neue Beiträge zur Germanistik* (4).

Stowell, T. (2007). The syntactic expression of tense. *Lingua* (117), pp. 437–463.

Wiklund, A.-L. (2001). Dressing up for vocabulary insertion: The parasitic supine. *Natural Language and Linguistic Theory 19*, pp. 199–228.

Wurmbrand, S. (2012). The syntax of valuation in auxiliary–participle constructions. In J. Choi et al. (Ed.), *Coyote Working Papers: Proceedings of the 29th West Coast Conference on Formal Linguistics (WCCFL 29)*, pp. 154–162.

Zeijlstra, H. (2012). There is only one way to agree. *The Linguistic Review 29*(3) pp. 491–539.

Zwart, J.-W. (2017a). An argument against the syntactic nature of verb movement. In L. R. Bailey and M. Sheehan (Ed.), *Order and structure in syntax I*, Open Generative Syntax 1, Berlin: Language Science Press, pp. 29–48.

Zwart, J.-W. (2017b). Postsyntactic morphology and the syntax of verb clusters: Keynote session, Tenselessness Workshop, University of Greenwich, 5/10/2017.

Appendix: Tested sentences

French

Posteriority

(93) *À midi, Obama est sorti de la Maison Blanche,*
at noon Obama is left of the House White
s'étant dirigé directement vers l'aéroport militaire.
CL.3S-AUX.GER head.PP directly to the-airport military
'At noon Obama left the White House and went directly to the
military airport.'

(94) *À midi, Obama est sorti de la Maison Blanche, se*
at noon Obama is left of the House White CL.3S
dirigeant directement vers l'aéroport militaire.
head.GER directly to the-airport military
'At noon Obama left the White House and went directly to the
military airport.'

(95) *Vers midi, Obama est sorti de la Maison Blanche, l'Air*
around noon Obama is left of the White House the-Air
Force One ayant décollé à 13.35.
Force One AUX.GER take-off.PP at 13.35
'Around noon Obama left the White House, and the the Air Force
One took off at 13.35.'

(96) *Vers midi, Obama est sorti de la Maison Blanche, l'Air*
around noon Obama is left of the White House the-Air
Force One décollant à 13.35.
Force One take-off.GER at 13.35
'Around noon Obama left the White House, and the the Air Force
One took off at 13.35.'

Inclusion

(97) *Pendant les Oscars, Viola Davis a prononcé un discours*
during the Oscars Viola Davis has given a speech
enflammé contre la discrimination raciale, ayant
passionate against the discrimination racial AUX.GER
partagé quelques histoires de sa propre vie professionnelle.
share.PP some stories of her own life professional
'During the Oscars, Viola Davis gave a passionate speech against racial discrimination, in which she shared some stories of her own professional life.'

(98) *Pendant les Oscars, Viola Davis a prononcé un discours*
during the Oscars Viola Davis has given a speech
enflammé contre la discrimination raciale, partageant
passionate against the discrimination racial share.GER
quelques histoires de sa propre vie professionnelle.
some stories of her own life professional
'During the Oscars, Viola Davis gave a passionate speech against racial discrimination, in which she shared some stories of her own professional life.'

(99) *Le dernier jour du festival, les concerts se sont prolongés*
the last day of.the festival the concerts lasted
pendant toute la soirée, Adèle ayant chanté
for all the evening Adèle AUX.GER perform.PP at
à 19.30.
19.30
'On the last day of the festival the concerts went on all evening, with Adele performing at 19.30.'

(100) *Le dernier jour du festival, les concerts se sont prolongés*
the last day of.the festival the concerts lasted
pendant toute la soirée, Adèle chantant à 19.30.
for all the evening Adèle perform.GER at 19.30
'On the last day of the festival the concerts went on all evening, with Adele performing at 19.30.'

Temporally unspecified relations

(101) *Lors de la saison dernière, le Paris Saint-Germain n'a*
during of the season last the Paris Saint-Germain has

perdu qu'une fois, à Montpellier, ayant gagné dans
lost   only-one time, in Montpellier, AUX.GER win.PP in
toutes les autres villes.
all   the other cities
'Last season, the Paris Saint-Germain only lost one match, in
Montpellier, and won in all the other cities.'

(102) *Lors   de la   saison dernière, le   Paris Saint-Germain n'a*
    during of the season last   the Paris Saint-Germain has
   perdu qu'une   fois, à   Montpellier, gagnant dans toutes les
   lost   only-one time, in Montpellier, win.GER in   all   the
   autres villes.
   other cities
   'Last season, the Paris Saint-Germain only lost one match, in
   Montpellier, and won in all the other cities.'

(103) *L'année   dernière, le   Paris Saint-Germain a   gagné presque*
    the-year last   the Paris Saint-Germain has won   almost
   tous les matchs, le   Montpellier HB ayant   été la
   all   the matches the Montpellier HB AUX.GER be.PP the
   seule équipe à les   vaincre.
   only team   to them defeat
   'Last year the Paris Saint-Germain won almost all matches, with the
   Montpellier HB being the only team that defeated them.'

(104) *L'année   dernière, le   Paris Saint-Germain a   gagné presque*
    the-year last   the Paris Saint-Germain has won   almost
   tous les matchs, le   Montpellier HB étant la   seule équipe
   all   the matches the Montpellier HB be.GER the only team
   à les   vaincre.
   to them defeat
   'Last year the Paris Saint-Germain won almost all matches, with the
   Montpellier HB being the only team that defeated them.'

Anteriority

(105) *Ce   vendredi, Macron est retourné à   Paris, ayant   signé*
    this Friday   Macron is returned to Paris AUX.GER sign.PP
   plusieurs accords de coopération   pendant son voyage en
   several   treaties of cooperation during his visit to

Afrique.
Africa

'On Friday Macron returned to Paris, having signed several cooperation agreements during his visit to Africa.'

(106) *Ce   vendredi, Macron   est   retourné   à   Paris,   signant*
    this Friday   Macron is   returned to Paris sign.GER
    plusieurs accords de coopération   pendant son voyage en
    several   treaties of cooperation during   his   visit   to
    Afrique.
    Africa

    'On Friday Macron returned to Paris, having signed several cooperation agreements during his visit to Africa.'

(107) *Ce   vendredi, Bruno le Maire a   dû   interrompre son*
    this Friday   Bruno le Maire has needed interrupt   his
    voyage au   Sénégal, le président ayant   convoqué   une
    visit   to.the Senegal the president AUX.GER convene.PP a
    réunion   extraordinaire du   Conseil des   Ministres.
    meeting   extraordinary   of.the Council of.the Ministers

    'This Friday Bruno le Maire had to interrupt his visit to Senegal because the president had convened an extraordinary meeting of the Council of Ministers.'

(108) *Ce   vendredi, Bruno le Maire a   dû   interrompre son*
    this Friday   Bruno le Maire has needed interrupt   his
    voyage au   Sénégal, le président convoquant   une réunion
    visit   to.the Senegal the president convene.GER a   meeting
    extraordinaire du   Conseil des   Ministres.
    extraordinary   of.the Council of.the Ministers

    'This Friday Bruno le Maire had to interrupt his visit to Senegal because the president had convened an extraordinary meeting of the Council of Ministers.'

Galician

Posteriority

(109) *Ao redor das   14h, Obama saiu da   Casa   Branca,*
    around   of.the 14h Obama left of.the House White

téndose   dirixido   directamente ao   aeroporto militar.
AUX.GER-CL.3S head.PP directly   to.the airport   military
'Around 2 p.m. Obama left the White House and went directly to
the military airport.'

(110) *Ao redor das   14h, Obama saiu da   Casa   Branca,*
around of.the 14h Obama left of.the House White
dirixíndose   directamente ao   aeroporto militar.
head.GER-CL.3S directly   to.the airport   military
'Around 2 p.m. Obama left the White House and went directly to
the military airport.'

(111) *Ás   10h, Obama saiu da   Casa   Branca en dirección*
at.the 10h Obama left of.the White House in direction
ao   aeroporto militar, tendo   partido o   Air Force One
to.the airport   military AUX.GER leave.PP the Air Force One
ao redor do   mediodía.
around of.the noon
'At 10 a.m. Obama left the White House for the military airport,
where the Air Force One took off around noon.'

(112) *Ás   10h, Obama saiu da   Casa   Branca en dirección*
at.the 10h Obama left of.the White House in direction
ao   aeroporto militar, partindo o   Air Force One ao redor
to.the airport   military leave.GER the Air Force One around
do   mediodía.
of.the noon
'At 10 a.m. Obama left the White House for the military airport,
where the Air Force One took off around noon.'

Inclusion

(113) *Nos   Oscars, Viola Davis fixo   un discurso furioso   contra*
in.the Oscars Viola Davis made a speech furious against
a   discriminación racial, tendo   contado algunhas historias
the discrimination racial AUX.GER tell.PP some   stories
da   súa propia vida profesional.
of.the her own   life professional
'During the Oscars, Viola Davis gave a furious speech against racial
discrimination, in which she told some stories of her own
professional life.'

(114) *Nos   Oscars, Viola Davis fixo   un discurso furioso   contra*
     in.the Oscars Viola Davis made a   speech furious against
     a   discriminación   racial, contando algunhas historias da   súa
     the discrimination racial tell.GER some   stories   of.the her
     propia vida profesional.
     own   life professional
     'During the Oscars, Viola Davis gave a passionate speech against
     racial discrimination, in which she told some stories of her own
     professional life.'

(115) *O   último día   do   festival, os   concertos duraron toda a*
     the last   day of.the festival the concerts lasted   all   the
     tarde,   tendo   actuado   Adele ás   17 horas.
     afternoon AUX.GER perform.PP Adele at.the 17 hours
     'On the last day of the festival the concerts went on all afternoon,
     with Adele performing at 5 p.m.'

(116) *O   último día   do   festival, os   concertos duraron toda a*
     the last   day of.the festival the concerts lasted   all   the
     tarde,   actuando   Adele ás   17 horas.
     afternoon perform.GER Adele at.the 17 hours
     'On the last day of the festival the concerts went on all afternoon,
     with Adele performing at 5 p.m.'

Temporally unspecified relations

(117) *Na   temporada pasada, o   FC Barcelona só   perdeu fóra*
     in.the season   last   the FC Barcelona only lost   away
     unha vez, en Granada, tendo   vencido en todas as   outras
     one time in Granada AUX.GER win.PP in all   the other
     cidades.
     cities
     'Last season, the FC Barcelona only lost one away match, in
     Granada, and won in all the other cities.'

(118) *Na   temporada pasada, o   FC Barcelona só   perdeu fóra*
     in.the season   last   the FC Barcelona only lost   away
     unha vez, en Granada, vencendo en todas as   outras cidades.
     one time in Granada win.GER in all   the other cities
     'Last season, the FC Barcelona only lost one away match, in
     Granada, and won in all the other cities.'

108

(119) *O ano pasado, o FC Barcelona gañou case todos os*
    the year last the FC Barcelona won almost all the
    partidos, tendo conseguido derrotalo só o Granada
    matches AUX.GER succeed.PP defeat-them only the Granada
    CF.
    CF

    'Last year the FC Barcelona won almost all matches, with only the
    Granada CF being able to defeat them.'

(120) *O ano pasado, o FC Barcelona gañou case todos os*
    the year last the FC Barcelona won almost all the
    partidos, conseguindo derrotalo só o Granada CF.
    matches succeed.GER defeat-them only the Granada CF

    'Last year the FC Barcelona won almost all matches, with only the
    Granada CF being able to defeat them.'

Anteriority

(121) *Este luns, o Presidente regresou a Madrid, tendo*
    this Monday the President returned to Madrid AUX.GER
    asinado varios acordos de cooperación durante a súa viaxe
    sign.PP several treaties of cooperation during the his visit
    a África.
    to Africa

    'On Monday the President returned to Madrid, having signed
    several cooperation agreements during his visit to Africa.'

(122) *Este luns, o Presidente regresou a Madrid, asinando*
    this Monday the President returned to Madrid sign.GER
    varios acordos de cooperación durante a súa viaxe a
    several treaties of cooperation during the his visit to
    África.
    Africa

    'On Monday the President returned to Madrid, having signed
    several cooperation agreements during his visit to Africa.'

(123) *Este luns, Josep Borrell tivo que regresar anticipadamente*
    this Monday Josep Borrell had to return early
    da súa viaxe a Senegal, tendo convocado o
    from.the his visit to Senegal AUX.GER convene.PP the

primeiro ministro unha reunión extraordinaria do Consello de
prime-minister a meeting extraordinary of.the Council of
Ministros.
Ministers

'This Monday Josep Borrell had to return early from his visit to Senegal because the prime-minister had convened an extraordinary meeting of the Council of Ministers.'

(124) *Este luns, Josep Borrell tivo que regresar anticipadamente*
this Monday Josep Borrell had to return early
da súa viaxe a Senegal, convocando o
from.the his visit to Senegal convene.GER the
primeiro ministro unha reunión extraordinaria do Consello de
prime-minister a meeting extraordinary of.the Council of
Ministros.
Ministers

'This Monday Josep Borrell had to return early from his visit to Senegal because the prime-minister had convened an extraordinary meeting of the Council of Ministers.'

Portuguese

Posteriority

(125) *Por volta das 14h, Obama saiu da Casa Branca,*
around of.the 14h Obama left of.the House White
tendo-se dirigido diretamente ao aeroporto militar.
AUX.GER-CL.3S head.PP directly to.the airport military

'Around 2 p.m. Obama left the White House and went directly to the military airport.'

(126) *Por volta das 14h, Obama saiu da Casa Branca,*
around of.the 14h Obama left of.the House White
dirigindo-se diretamente ao aeroporto militar.
head.GER-CL.3S directly to.the airport military

'Around 2 p.m. Obama left the White House and went directly to the military airport.'

(127) *Às 10h, Obama saiu da Casa Branca em direção*
at.the 10h Obama left of.the White House in direction

110

ao   aeroporto militar, tendo   o   Air Force One partido
to.the airport   military AUX.GER the Air Force One leave.PP
por volta do   meio-dia.
around   of.the noon

'At 10 a.m. Obama left the White House for the military airport,
where the Air Force One took off around noon.'

(128) *Às   10h, Obama saiu da   Casa   Branca em direção*
      at.the 10h Obama left of.the White House in   direction
      ao   aeroporto militar, partindo o   Air Force One
      to.the airport   military leave.GER the Air Force One
      por volta do   meio-dia.
      around   of.the noon

      'At 10 a.m. Obama left the White House for the military airport,
      where the Air Force One took off around noon.'

Inclusion

(129) *Nos   Óscares, Viola Davis fez   um discurso inflamado*
      in.the Oscars Viola Davis made a   speech passionate
      contra a   discriminação racial, tendo   partilhado algumas
      against the discrimination racial AUX.GER share.PP   some
      histórias da   sua própria vida profissional.
      stories of.the her own   life professional

      'During the Oscars, Viola Davis gave a passionate speech against
      racial discrimination, in which she shared some stories of her own
      professional life.'

(130) *Nos   Óscares, Viola Davis fez   um discurso inflamado*
      in.the Oscars Viola Davis made a   speech passionate
      contra a   discriminação racial, partilhando algumas histórias
      against the discrimination racial share.GER   some   stories
      da   sua própria vida profissional.
      of.the her own   life professional

      'During the Oscars, Viola Davis gave a passionate speech against
      racial discrimination, in which she shared some stories of her own
      professional life.'

(131) *No   último dia do   festival, os concertos duraram toda*
      on.the last   day of.the festival the concerts lasted   all

111

a   tarde,   tendo   a   Adele   atuado   às   16   horas.
the afternoon AUX.GER the Adele perform.PP at.the 16 hours
'On the last day of the festival the concerts went on all afternoon, with Adele performing at 4 p.m.'

(132) *No   último dia do   festival, os   concertos duraram toda*
on.the last   day of.the festival the concerts lasted   all
a   tarde,   atuando   a   Adele às   16 horas.
the afternoon perform.GER the Adele at.the 16 hours
'On the last day of the festival the concerts went on all afternoon, with Adele performing at 4 p.m.'

Temporally unspecified relations

(133) *Na   época   passada, o   FC Porto só   perdeu fora   uma*
in.the season last   the FC Porto only lost   away one
vez, em Braga, tendo   vencido em todas as   outras cidades.
time in Braga AUX.GER win.PP in all   the other cities
'Last season, the FC Porto only lost one away match, in Braga, and won in all the other cities.'

(134) *Na   época   passada, o   FC Porto só   perdeu fora   uma*
in.the season last   the FC Porto only lost   away one
vez, em Braga, vencendo em todas as   outras cidades.
time in Braga win.GER in all   the other cities
'Last season, the FC Porto only lost one away match, in Braga, and won in all the other cities.'

(135) *No   ano   passado, o   FC Porto ganhou quase   todos os*
in.the year last   the FC Porto won   almost all   the
jogos,   tendo   o   Sporting sido   a   única equipa a
matches AUX.GER the Sporting be.PP the only team   to
conseguir   derrotá-lo.
manage   defeat-them
'Last year the FC Porto won almost all matches, with the Sporting being the only team that managed to defeat them.'

(136) *No   ano   passado, o   FC Porto ganhou quase   todos os*
in.the year last   the FC Porto won   almost all   the
jogos,   sendo   o   Sporting a   única equipa a   conseguir
matches be.GER the Sporting the only team   to manage

derrotá-lo.
defeat-them

'Last year the FC Porto won almost all matches, with the Sporting being the only team that managed to defeat them.'

Anteriority

(137) *Nesta   sexta-feira, o   primeiro-ministro regressou a   Lisboa,*
     on.this Friday   the prime-minister   returned to Lisbon
     tendo   assinado vários   acordos de cooperação   durante a
     AUX.GER sign.PP   several treaties of cooperation during the
     sua viagem a   África.
     his visit   to Africa

     'On Friday the prime-minister returned to Lisbon, having signed several cooperation agreements during his visit to Africa.'

(138) *Nesta   sexta-feira, o   primeiro-ministro regressou a   Lisboa,*
     on.this Friday   the prime-minister   returned to Lisbon
     assinando vários   acordos de cooperação   durante a   sua
     sign.GER several treaties of cooperation during the his
     viagem a   África.
     visit   to Africa

     'On Friday the prime-minister returned to Lisbon, having signed several cooperation agreements during his visit to Africa.'

(139) *Nesta   sexta-feira, Augusto Santos Silva teve de regressar*
     on.this Friday   Augusto Santos Silva had to return
     antecipadamente da   sua viagem a   Angola, tendo   o
     early   from.the his visit   to Angola AUX.GER the
     primeiro-ministro convocado   uma reunião   extraordinária do
     prime-minister convene.PP a   meeting extraordinary of.the
     Conselho de Ministros.
     Council   of Ministers

     'This Friday Augusto Santos Silva had to return early from his visit to Angola because the prime-minister had convened an extraordinary meeting of the Council of Ministers.'

(140) *Nesta   sexta-feira, Augusto Santos Silva teve de regressar*
     on.this Friday   Augusto Santos Silva had to return
     antecipadamente da   sua viagem a   Angola, convocando
     early   from.the his visit   to Angola convene.GER

113

o   primeiro-ministro uma reunião extraordinária do
the prime-minister a   meeting extraordinary of.the
Conselho de Ministros.
Council of Ministers
'This Friday Augusto Santos Silva had to return early from his visit
to Angola because the prime-minister had convened an
extraordinary meeting of the Council of Ministers.'

Spanish

Posteriority

(141) *Hacia   las 14 horas Obama salió de la Casa   Blanca,*
 around the 14 hours Obama left of the House White
habiéndose   dirigido directamente al   aeropuerto militar.
AUX.GER-CL.3S head.PP directly   to.the airport   military
'Around 2 p.m. Obama left the White House and went directly to
the military airport.'

(142) *Hacia   las 14 horas Obama salió de la Casa   Blanca,*
 around the 14 hours Obama left of the House White
dirigiéndose   directamente al   aeropuerto militar.
head.GER-CL.3S directly   to.the airport   military
'Around 2 p.m. Obama left the White House and went directly to
the military airport.'

(143) *A las 10 horas de la mañana Obama salió de la Casa*
 at the 10 hours of the morning Obama left of the White
Blanca en dirección al   aeropuerto militar, habiendo
House in direction to.the airport   military AUX.GER
despegado el Air Force One hacia   el mediodía.
take-off.PP the Air Force One around the noon
'At 10 a.m. Obama left the White House for the military airport,
where the Air Force One took off around noon.'

(144) *A las 10 horas de la mañana Obama salió de la Casa*
 at the 10 hours of the morning Obama left of the White
Blanca en dirección al   aeropuerto militar, despegando el
House in direction to.the airport   military take-off.GER the
Air Force One hacia   el mediodía.
Air Force One around the noon

114

'At 10 a.m. Obama left the White House for the military airport, where the Air Force One took off around noon.'

Inclusion

(145) *En los Oscars, Viola Davis dio un discurso apasionado*
in the Oscars Viola Davis gave a speech passionate
contra la discriminación racial, habiendo compartido algunas
against the discrimination racial AUX.GER share.PP some
historias de su propia vida profesional.
stories of her own life professional
'During the Oscars, Viola Davis gave a passionate speech against racial discrimination, in which she shared some stories of her own professional life.'

(146) *En los Oscars Viola Davis dio un discurso apasionado*
in the Oscars Viola Davis gave a speech passionate
contra la discriminación racial, compartiendo algunas historias
against the discrimination racial share.GER some stories
de su propia vida profesional.
of her own life professional
'During the Oscars, Viola Davis gave a passionate speech against racial discrimination, in which she shared some stories of her own professional life.'

(147) *El último día del festival los conciertos duraron toda la*
the last day of.the festival the concerts lasted all the
tarde, habiendo actuado Adele a las 16 horas.
afternoon AUX.GER perform.PP Adele at the 16 hours
'On the last day of the festival the concerts went on all afternoon, with Adele performing at 4 p.m.'

(148) *El último día del festival los conciertos duraron toda la*
the last day of.the festival the concerts lasted all the
tarde, actuando Adele a las 16 horas.
afternoon perform.GER Adele at the 16 hours
'On the last day of the festival the concerts went on all afternoon, with Adele performing at 4 p.m.'

Temporally unspecified relations

(149) *En la temporada pasada el Almuñécar F.C. solo perdió una*
in the season last the Almuñécar F.C. only lost one
vez fuera de casa, en Motril, habiendo ganado en todas las
time out of home in Motril AUX.GER win.PP in all the
demás ciudades.
other cities

'Last season, the Almuñécar F.C. only lost one away match, in
Motril, and won in all the other cities.'

(150) *En la temporada pasada el Almuñécar F.C. solo perdió una*
in the season last the Almuñécar F.C. only lost one
vez fuera de casa, en Motril, ganando en todas las demás
time out of home in Motril win.GER in all the other
ciudades.
cities

'Last season, the Almuñécar F.C. only lost one away match, in
Motril, and won in all the other cities.'

(151) *El año pasado el Almuñécar F.C. ganó casi todos los*
the year last the Almuñécar F.C. won almost all the
partidos, habiéndolo derrotado solo el CF Monforte.
matches AUX.GER-CL.3S defeat.PP only the CF Monforte

'Last year the Almuñécar F.C. won almost all matches, with only the
CF Monforte defeating them.'

(152) *El año pasado el Almuñécar F.C. ganó casi todos los*
the year last the Almuñécar F.C. won almost all the
partidos, derrotándolo solo el CF Monforte.
matches defeat.GER-CL.3S only the CF Monforte

'Last year the Almuñécar F.C. won almost all matches, with only the
CF Monforte defeating them.'

Anteriority

(153) *El viernes Rajoy volvió a Madrid, habiendo firmado*
the Friday Rajoy returned to Madrid AUX.GER sign.PP
varios acuerdos de cooperación durante su viaje a América
several treaties of cooperation during his visit to America

116

Latina.
Latin
'On Friday Rajoy returned to Madrid, having signed several
cooperation agreements during his visit to Latin America.'

(154) *El   viernes Rajoy volvió   a   Madrid, firmando varios*
    the Friday Rajoy returned to Madrid sign.GER several
    acuerdos de cooperación   durante su   viaje a América Latina.
    treaties of cooperation during his visit to America Latin
    'On Friday Rajoy returned to Madrid, having signed several
    cooperation agreements during his visit to Latin America.'

(155) *El   viernes Luis de Guindos   tuvo que volver anticipadamente*
    the Friday Luis de Guindos had to   return early
    de   su viaje a Marruecos, habiendo convocado   Rajoy una
    from his visit to Morocco   AUX.GER convene.PP Rajoy a
    reunión   extraordinaria del   Consejo de Ministros.
    meeting extraordinary of.the Council of Ministers
    'On Friday Luis de Guindos had to return early from his visit to
    Morocco because Rajoy had convened an extraordinary meeting of
    the Council of Ministers.'

(156) *El   viernes Luis de Guindos   tuvo que volver anticipadamente*
    the Friday Luis de Guindos had to   return early
    de   su viaje a Marruecos, convocando   Rajoy una reunión
    from his visit to Morocco   convene.GER Rajoy a   meeting
    extraordinaria del   Consejo de Ministros.
    extraordinary of.the Council of Ministers
    'On Friday Luis de Guindos had to return early from his visit to
    Morocco because Rajoy had convened an extraordinary meeting of
    the Council of Ministers.'