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CONSECUTIVE CLAUSES IN EUROPEAN PORTUGUESE: A SYNTACTIC APPROACH[1]

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1. Introduction

Consecutive clauses exhibit syntactic properties that in several respects remain relatively unknown. Assuming the current generative framework, we will analyse two main types of consecutives, mainly focussing on European Portuguese: the consecutives with an antecedent, illustrated in (1), which present an adjectival (A), adverbial (ADV), nominal (N) or verbal (V) expression affected by an overt degree or quantifying expression, and the so-called free consecutives, whose related graded expression is not overtly expressed in the discursive unit where the consecutive clause occurs (see (2)).

(1) a. *Ele é tão alto$_A$ que a sua cabeça toca no teto*.
      he is so tall that the his head touches in.the celling
      'He is so tall that his head touches the celling.'
   b. *Ela trabalhou tão bem$_{ADV}$ que escreveu dois capítulos da tese*.
      she worked so well that wrote two chapters of.the thesis
      'She worked so well that she wrote two chapters of her thesis.'
   c. *Eu li tantos textos$_N$ que tenho os olhos cansados*.
      I read so.many texts that have the eyes tired
      'I read so many texts that my eyes are tired.'
   d. *Ela trabalhou$_V$ tanto que escreveu dois capítulos da tese*.
      she worked so.much that wrote two chapters of.the thesis
      'She worked so much that she wrote two chapters of her thesis.'

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(2) *Os miúdos portaram-se mal.   De tal   modo que os pais   foram*
     the kids   behaved   badly. In such.a way   that the parents were
     chamados à   escola.
     called   to.the school.
     'The kids behaved badly. In such a way that their parents have been
     instated to go to the school.'

In languages like English, Spanish, Italian or Portuguese, antecedent finite
consecutive clauses may also have close correlate infinitival constructions.
As exemplified in (3), for European Portuguese (see also its translation in
English), these clauses lack the prototypical degree items affecting the
modified expression (e.g. *tão* 'so'), which are replaced by other adverbials
(e.g., *suficientemente* 'enough') and present an infinitival clause. In
Portuguese, this infinitival clause is headed by the prepositional item *para*
'for':

(3) *Ela é suficientemente forte   para aguentar esse trabalho*.
     she is enough   strong for stand   this work
     'She is strong enough to stand this work.'

Syntactic studies have often not clearly distinguished finite and non-finite
antecedent consecutive clauses from comparatives, all of them being
considered as degree clauses (e.g. Abney 1987; Corver 1997a, b; Grosu &
Horvath 2006). Additionally, free consecutives have been mostly
neglected. Yet, semantically, all these clauses may be classified as
consecutives, since they share the property of presenting a quantification
over properties (cf. (1a, b) and (3)), individuals (cf. (1b)) or situations (2)
and express a consequence or a result of that quantification (e.g. Álvarez
1999, for Spanish; Giusti 1991, for Italian; Fonseca 1994, Cunha *et al*.
2010, Marques 2013, for EP).

     However, from a syntactic point of view, the subtypes mentioned
above show distinct properties and raise several questions: (i) What is the
categorial status of the consecutive connector (*que, para*)? (ii) How can
the correlation between the expression of quantification / intensity and the
second clause be described? (iii) How can we account for the word order
in consecutive clauses? (iv) Is it possible to propose a unified analysis for
the different types of consecutives?

     In this study we will propose a syntactic account of consecutives in
European Portuguese, extending the analysis of finite consecutives with
antecedent to non-finite consecutives and free consecutives. Regarding
consecutives with antecedent, we will explore Corver's (1993, 1997a, b,
2013) hypothesis of a split degree system and the raising of the gradable

expression, together with Kennedy's (1997, 1999) idea that consecutives are adjuncts to DegP and form a constituent with Deg at LF; in this way we avoid the need of a mechanism of extraposition to account for the consecutive construction word order. We will extend the core proposals of this analysis to free consecutives; however, some adjustments are made in order to capture the fact that they occur in juxtaposition to the clause which presents the gradable expression (see (2)). In effect we assume that while in antecedent consecutives the relation between the antecedent clause and the consecutive involves subordination/ hypotaxis, free consecutives establish with the related sentence a paratactic relation.

The paper is structured as follows: section 2 analyses the properties of antecedent consecutives: subsection 2.1 is devoted to the analysis of finite antecedent consecutives; subsection 2.2 adapts this approach to non-finite consecutives. Section 3 extends the previous analysis to free consecutives, retaining most of the core traits of finite antecedent consecutives. Finally, section 4 presents our main conclusions.

2. Antecedent consecutive clauses

In this section we will try to propose a syntactic analysis for antecedent consecutives in European Portuguese, both finite and non-finite. In subsection 2.1, we will describe the properties of these complex sentences and discuss the treatments that have been proposed for their correlates in other languages, in order to establish our approach to finite consecutive clauses in European Portuguese. In subsection 2.2 we extend this analysis to non-finite antecedent consecutives.

2.1. Consecutives are CPs dependent from Degree/Quantifier expressions

Finite consecutive clauses are CPs headed by a complementizer with [+finite, +declarative] features (in Portuguese *que* 'that'), which depend on a sentence presenting an expression of quantity or degree (*tão* 'so', *tanto* 'so many/so much', *tal* 'such a') affecting a gradable or a scalar expression of variable categorial nature: A, Adv, N and V (for European Portuguese, see Brito 2003; Cunha *et al*.2010; Fonseca 1994; Marques; 2013; Martinho 2007), as shown in (1) and (4):

(4) a. *Eu estou tão terrivelmente cansada$_A$ que não me   consigo mexer*.
     I   am   so terribly   tired   that not CL.1SG can   move
     'I am so terribly tired that I cannot move.'

    b. *Ela falava tão lentamente*_{ADV} *que ele adormeceu.*
      she spoke so slowly   that he fell.asleep
      'She spoke so slowly that he fell asleep.'

    c. *O miúdo fez tal   berreiro*_N *que a mãe   lhe   pegou ao*
      the kid   made such.a blubber that the mother CL.3SG took in.the
      colo.
      arms
      'The kid made such a blubber that his mother took him in her harms.'

    d. *O miúdo cresceu tanto   que não há   roupa que lhe   sirva.*
      the kid   grew   so.much that not there.is cloth that CL.3SG fit
      'The kid grew so much that his clothes do not fit him anymore.'

The relation between the CP and the related sentence is classically classified as a case of subordination, akin to the one established by the relative clause with its antecedent (cf. Abney 1987).

    To syntactically account for the dependency of consecutives with respect to the intensity expression and the word order they exhibit, different hypotheses have been proposed in the literature.

2.1.1. The consecutive CP as a sister of Deg and A

Abney (1987), analysing the structure of the AP with a gradable adjective, proposes that the projection of A corresponds to the functional category Deg(ree)P. He emphasises the similarities between the relative clauses and what he calls "extent clauses", where he includes the comparatives and finite consecutives like (5):

    (5) *Ele é tão trabalhador que tem sempre boas notas.*
      he is so hardworking that has always good marks
      'He is so hardworking that he always gets good marks.'

Abney (1987: 315) suggests a tripartite structure based on the relation of "sisterhood":

    (6) [_{DegP} [Deg] [A] [CP]]

This structure tries to capture that consecutives are dependent from the degree expression and that they modify scalar or gradable adjectives. However, this analysis presents several problems. In particular, it proposes a tripartite structure of DegP, therefore it does not adequately analyse the correlation between the Degree (Quantifying) expression and the finite clause.

In addition, like many other authors (e.g. Bhatt & Pancheva 2004; Corver 1993,1997a, b; Kennedy 1997, 1999), Abney disregards the fact that consecutives, like comparatives, may also appear with gradable predicates, other than adjectives, as shown in (7) for nouns and verbs:

(7) a. *O   João deu   tantas   aulas   que ficou cansadíssimo.*
      the João gave so.many courses that got   very.tired
      'João lectured so many courses that he got very tired.'
   b. *O   miúdo cresceu tanto   que não há   roupa que lhe   sirva.*
      the kid   grew   so.much that not there.is cloth   that CL.3SG fit
      'The kid grew so much that his clothes do not fit him anymore.'

2.1.2. The finite consecutive as a complement of Deg/Q

Developing ideas from Bresnan (1973) and Heim (2000), Bhatt & Pancheva (2004) propose an alternative to (8) for AP comparatives: they consider that the comparative clause is selected as a complement of a Deg(ree) head, analysed as a category that intrinsically includes quantifying features, which selects for the degree clause. According to the authors, this DegP is merged as the specifier of the gradable predicate (cf. Bhatt & Pancheva 2004: 9):

(8) [$_{AP}$ [$_{DegP<+quant>}$[Deg$_{<+quant>}$][degree clause]] [$_{A'}$ A]]

This structural configuration will straightforwardly account for the selection restrictions that the Deg item impose on the degree clause (ex: *as…as*; *more…than*, etc). However, assuming that in languages like English or Portuguese the specifier typically precedes the gradable predicate, this analysis has the disadvantage of not being able to account for the word order in which the degree clause surfaces. In fact, considering the consecutive CPs, without additional provisos, (8) would produce unacceptable sequences like those in (9), for European Portuguese, which should be contrasted with the sentences in (5) and (7) above:

(9) a.*_Ele é tão que tem sempre boas notas trabalhador._
      he is so that has always good marks hardworking
   b.*_O João deu tantas   que ficou   cansadíssimo aulas._
      the João gave so.many that became very.tired   classes
   c.*_O miúdo tanto   que não há   roupa_
      the kid   so.much that not there.is cloth
      que lhe   sirva   cresceu.
      that CL.3SG fit   grow

In order to prevent the discontinuity between the gradable predicate and the Deg words, extraposition should apply, as it has been proposed for comparative clauses. Accordingly, the consecutive CP would be moved and merged into a post-gradable predicate position, as shown in (10) for a sentence like (5):

(10) *Ele é* [$_{AP}$ [$_{DegP}$[*tão*] [$_{CP}$ *que tem sempre boas notas*]] [$_A$ *trabalhador*]] =>
        he   is   so   that gets always good marks   hardworking
        Ele é [$_{AP}$ [$_{DegP}$ [[*tão*]$_{CPi}$[$_A$*trabalhador*]][$_{CPi}$*que tem sempre boas notas*]]
        he is   so   hardworking   that gets always good marks
        'He is so hardworking that he always gets good marks'.

However, extraposition is problematic in the current minimalist framework, which assumes that displacement should not be triggered only to obtain the surface order of the constituents, but for morphosyntactic or discursive /interpretative reasons.

    Bhatt & Pancheva's (2004) analysis of comparatives tries to overcome this problem. They assume that the DegP specifier of the gradable predicate is a quantified expression (cf. (11a)). Being a quantificational element, DegP must rise to a scope position, so it right adjoins to the maximal projection that contains the gradable predicate in overt Syntax, leaving a copy in its original position; due to morphological constraints, it is this lower copy that is spelled out (cf. (11b)). Finally, the degree CP is late merged as the complement of the raised unpronounced quantified DegP, as shown in (11c):

(11) a. [$_{AP}$ [$_{DegP<+Quant>}$ [$_{Deg}$*tão*]] [$_{A'}$ [$_A$ *alto*]]]
      b. [$_{AP}$ [$_{AP}$ [$_{DegP<+Quant>}$ [$_{Deg}$*tão*]] [$_{A'}$ [$_A$ *alto*]]] [$_{DegP<+Quant>}$[$_{Deg}$*tão*]]]
      c. [$_{AP}$ [$_{AP}$ [$_{DegP<+Quant>}$ [$_{Deg}$*tão*]] [$_{A'}$ [$_A$ *alto*]]] [$_{DegP<+Quant>}$ [$_{Deg'}$ [$_{Deg}$*tão*] [degree
         clause]]]]

This analysis accounts for the surface word order and provides a motivation for extraposition: the late merge of CP is not stipulated to obtain the correct word order, but is required for trace interpretation (as in Fox 2002 and Fox & Nissenbaum1999). This approach also has several problems. In particular, the spell out of lower copies of movement is controversial. According to the current framework, in structures resulting from Internal Merge only the structurally prominent copy is pronounced, except in cases of covert movement (e.g. Chomsky 2013). However, assuming the derivation by phase, only after Transfer to the interface level of semantic interpretation (Logical Form), could DegP covertly move and right adjoin to AP. This would cause serious problems to the late merge of

the degree clause: if it applies at Logical Form, the degree clause will not be visible at the level of phonological interpretation (Phonetic Form).

Also, Grosu & Horvath (2006), developing a proposal by van Riemsdijk (1998), claim that, in some languages, the restriction on the position of adjectival complements and degree clauses may be not due to extraposition but to a "head-to-head adjacency effect". Considering comparative clauses, they argue that there are languages where the degree expression may occur at the left of the adjective, as in Romanian (cf. (12)) and in Hungarian (cf. (13)), examples from Grosu & Horvath (2006):

(12) a. *Ion este* (*exact*) *la fel de deştept ca tine*.
       Ion is just as of clever as you
       'Ion is (exactly) as clever as you.'
   b. (?) *Ion este* [(*exact*) *la fel ca tine] de deştept*.
        Ion is just as as you of clever

(13) a. *Mari kevésbé magas* [*Jánosnál*].
      Mary less tall John-at
   b. *Mari* [*Jánosnál*] *kevésbé magas*
      Mary John-at less tall
      'Mary is less tall than John.'

These data suggest that in degree clauses, including comparatives and consecutive clauses, CP extraposition for scope reasons, as proposed by Bhatt & Pancheva, is not compatible with the derivation by phase approach and may even not be empirically motivated across languages.

2.1.3. The split degree system and consecutives as adjuncts to DegP

To overcome the word order problem without recourse to extraposition, Kennedy (1997, 1999) assumes that a degree adjectival construction is a DegP, headed by a degree word that selects the gradable predicate, AP, as its complement. The degree clause is conceived as a modifier of DegP, right merged to Deg', as in (14).[2] According to Kennedy, the degree expression and the degree clause will form a unit only at LF:

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[2] Notice, however, that Kennedy's proposal does not account for word order in some types of comparatives, and, to keep the subordinate status of the degree clause, it has to resort to extraposition, as shown by the contrast between (i) and (ii):
   (i) Mary gives more candies to her children in a day than Susan in a month.
   (ii) *Mary gives [more candies [than Susan in a month]] to her children in a
      day.

(14) [DegP [Deg' Deg AP] [degree clause]]

Adopting this proposal for consecutives, a sentence like (15a) would be assigned the simplified representation in (15b):

(15) a. *Ele é tão alto que a sua cabeça toca no teto*.
         he is so tall that the his head   touches in.the ceiling
         'He is so tall that his head touches the ceiling.'
     b. *Ele é* [DegP [Deg' [*Deg tão*] [AP *alto*]] [CP *que a sua cabeça toca no teto*]]

Still now, it has been assumed that degree clauses (i.e., comparative and consecutives) are related to a degree functional category, which presents inherent quantificational content. However, Corver (1997, 2013) based on data from English, Dutch, Welsh and other languages, proposed a split DegP analysis. He distinguished between DegP and QP, developing an idea from Bresnan (1973) about the distinction between quantifier-like degree words (*enough*, *more*, *less*) and determiner-like degree words (*as, so, too, how)*. Corver also assumes that some adverbs, like *utterly* or *very* in English, are projected in the specifier position of QP, in expressions like (16):

(16) a. … so extremely poisonous
     b. … so utterly confused that he fell off the podium
     c. … how very long
     d. … too much so….

Thus, Corver proposes a split degree system for comparatives and consecutives, where DegP dominates QP, as shown in (17):

(17) [DegP Deg [QP Q [AP]]]

According to Corver (2013: 46), the comparative or consecutive clause is right merged as an adjunct to DegP, as illustrated in (18), an example from the author:

(18) Fred was [DegP [DegP [Deg' so [QP utterly [Q'[Q-] [AP confused]]]]] [CP that he fell off the podium]]

See Matos & Brito (2002, 2008) for data on European Portuguese and arguments in favor of a syntactic analysis of comparatives in this language in terms of correlative coordination.

In sum, regarding consecutives, Corver's analysis of degree clauses, like the one presented in Kennedy (1997, 1999), directly accounts for the surface word order and overcomes the problem of extraposition, by assuming that the consecutive CP is a right adjunct of DegP.

Accepting this analysis, we propose for an example like (4a), here renumbered as (19a), the simplified representation in (19b):

(19) a. *Eu estou tão terrivelmente cansada   que não me   consigo mexer*.
        I   am   so   terribly   tired   that not CL.1SG can   move
        'I am so terribly tired that I cannot move.'
     b. … [DegP [DegP [Deg *tão* [QP *terrivelmente* [Q -] [AP *cansada*]]] [CP *que não me consigo mexer*]]

However, the split DegP analysis apparently faces a problem: how to account for sentences where only a quantifying word seems to occur in the DegP. This is the case of *more* or *less* in English comparatives (e.g., *She is more intelligent than we are*), or *tanto* 'so much' and *tantos* 'so many' in Portuguese consecutives:

(20) a. *O   atleta correu tanto   que foi   o   primeiro a atravessar*
        the athlete run   so.much that was the first   to cross
        a   meta.
        the mark
        'The athlete run so much that he was the first to cross the mark.'
     b. *Ele ganhou tantas   maratonas que se   tornou famoso*.
        he   won   so.many marathons that CL.3SG became famous
        'He won so many marathons that he became famous.'

As the examples in (20) show, *tanto* presents an invariable form that exhibits an adverbial interpretation (cf. (20a)), and a variable quantifier form that selects a nominal expression, with which it agrees in gender and number (cf. (20b)). We consider that the adverbial interpretation of *tanto* in (21a) results from the fact that it selects a null adverbial item, much in the same way as determiners are interpreted as pronouns whenever they select a *pro* complement in Romance languages:

(21) a. *O atleta correu* [DegP [DegP [Deg -]$_i$[QP [Q *tanto*]$_i$ [AdvP -]]] *que foi o primeiro* …
     b. *O atleta ganhou* [DegP [DegP [Deg-]$_i$ [QP [Q *tantas$_i$*] [NP *maratonas*]]] *que se tornou* …

The English translations of the examples in (20) also suggest that these quantifying words accumulate a degree value. So, we assume that they

must be related to the Deg head that selects the QP in degree constructions. The association of Deg to Q can be viewed either as raising of Q-to-Deg to value the unspecified (uninterpretable) features of Deg, or as inheritance of the features of Deg by Q, under local agreement. Since Deg features seem to be interpretable, we believe that it is the inheritance of the features of Deg by Q that is at work (cf. Chomsky 2013).[3]

2.2. Non-finite consecutive clauses

Extending Abney (1987: 312), Álvarez (1999) for Spanish, Giusti (1991) for Italian, Brito (2003) and Marques (2013) for European Portuguese, we assume the existence of infinitival antecedent consecutive clauses[4] introduced by the discontinuous expressions *suficientemente /bastante ...para,* 'enough ... to', *demasiado/demais… para* 'too (much)…to'. The first term is an adverbial, whose meaning conveys a graded quantity that affects a gradable expression (a noun, an adjective or an adverbial) and *para* 'for' is a prepositional head that introduces the infinitival clause, whose verb may occur in the inflected infinitive, as in the examples (22a) from Marques (2013: 2169), or in the invariable infinitive, in control sentences, as in (22b):[5]

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[3] Notice that in the case of adjectival comparative clauses involving a degree affix, as *-er* in English, we assume that this affix is externally merged in Deg and the affixal properties of this degree morpheme trigger movement of the adjective from A-to-Q and from Q-to-Deg.

[4] Marques (2013) takes these clauses as close to consecutives. Álvarez (1999) calls their correlates in Spanish as comparative consecutives. In fact, in this language, these clauses are introduced by the comparative connector *como* 'as' (e.g., *Amo demasiado a Gamones como para aplicarle sin más la dura letra de la Ley* 'I love Gamones too much to compel him to merely accept the severe terms of the Law', cf. Álvarez 1999: 3786).

[5] Some infinitival consecutives allow the quantified expression to be covert (Fonseca 1994), when the predicate implicitly includes a gradable quantifying value, as, for instance, *tarde* 'late' in (i). However, the majority of gradable predicates require an overt quantifying expression to keep the consecutive interpretation of the non-finite clause, as illustrated in (ii), from Marques (2013:2169):

   (i) *É tarde para irmos   ao   cinema.*
       is late   for go.INF.1PL to.the movies
       'It is late for us to go to the movies.'
   (ii) #*Há   luz   para conseguirmos ver nitidamente.*
        there.is light   for reach.INF.1PL see clearly
        'There is light for us to see clearly.'

(22) a. *Há   bastante luz$_N$ para conseguirmos   ver nitidamente.*
     there.is enough light for   succeed.INF.1PL see clearly
     'There is light enough for us to be able to see clearly.'
   b. *A   Ana é suficientemente esperta$_A$ para decifrar   o   enigma.*
     the Ana is enough   clever   for decode.INF the enigma
     'Ana is clever enough to decode the enigma.'
   c. *É demasiado tarde$_{ADV}$ para ir   ao   cinema.*
     is too   late   for go.INF to.the movies
     'It is too late for us to go to the movies.'

With some gradable predicates, these non-finite consecutives have their own finite counterparts, where the prepositional connector *para* 'for' co-occurs with the complementizer *que* 'that' and the verb appears in the subjunctive, as illustrated in (23b):

(23) a. *É demasiado cedo para nós rejeitarmos   essa hipótese.*
     is too (much) soon for   we reject.INF.1PL that hypothesis
     'It is too soon for us to reject that hypothesis.'
   b. *É demasiado cedo para que nós rejeitemos   essa hipótese.*
     is too   soon for that we reject.SUBJ.1PL   that hypothesis
     'It is too soon for us to reject that hypothesis.'

This suggests that *para* 'for' in these consecutives keeps its full prepositional status and selects a CP headed by a Null complementizer in infinitival clauses and the complementizer *que* 'that' in finite clauses. This hypothesis is corroborated by the fact that most of these consecutives may be denoted by the expression *para isso* 'for that', where *para* selects the pronominal element *isso* and assigns case to it.

(24) a. A: *Há   bastante luz para conseguirmos ver nitidamente?*
       is.there enough light for   reach.INF.1PL   see clearly?
       'Is there light enough to see clearly?'
    B: *Sim, julgo   que há   bastante luz para isso.*
       yes, believe.1SG that there.is enough   light for   that
       'Yes, I believe that there is light enough for that.'
   b. A: *Achas   que a   Ana é suficientemente esperta para*
       believe.2SG that the Ana is enough   clever   for
       decifrar   o   enigma?
       decode.INF the enigma?
       'Do you think that Ana is clever enough to decode the enigma?'
    B: *Sim, penso   que ela é suficientemente esperta para isso.*
       yes, think.1SG that she is enough   clever   for   that
       'Yes, I think that Ana is clever enough to do that.'

   c. A: *É demasiado tarde para irmos   ao   cinema*.
        is too   late   for   go.INF.1PL to.the movies
        'It is too late for us to go to the movies.'
     B: *Não, nunca é demasiado tarde para isso*.
        no,   never is too   late   for   that
        'No, it is never too late for that.'
   d. A: *Ela pensa que é demasiado cedo para que nós rejeitemos*
        she thinks that is too   soon for   that we reject.SUBJ.1PL
        essa hipótese.
        that hypothesis
        'She thinks that it is too soon for us to reject that hypothesis.'
     B: *Eu concordo que é demasiado cedo para isso*.
        I   agree   that is too   soon for   that
        'I agree that it is too soon for that.'

Nevertheless, there are infinitival consecutives where *para* 'for' has already grammaticalized as an infinitival complementizer. In these cases, as expected, *para* does not license any pronominal element denoting the consecutive:

  (25) A. *Esse trabalho é suficientemente perigoso para eu não o*
        that job   is enough   dangerous for I   not it
        aceitar.
        accept.INF.1SG
        'That job is dangerous enough for me to reject it.'
     B. ??/*Sim, esse trabalho é suficientemente perigoso   para isso*.
          yes, that job   is enough   dangerous for   that

In sum, we may conclude that *para*–consecutive clauses are either PPs, whose P selects a CP (cf. (22), (23)) or *para* is a complementizer that heads an infinitival CP (cf. (25)). Therefore, we assume that in non-finite consecutives, C exhibits [+declarative] force and [–finite] features, as in (22),(23a) and (25), or C is instantiated by *que* ´that' and presents [+declarative] force and [+finite] features, as in (23b). The representations in (26b) and (27b) illustrate the structure of the consecutive CP, where *para* 'for' occurs as a preposition; (28) represents a case like (25A), where *para* has grammaticalized as a complementizer:

  (26) a. *É demasiado cedo para nós rejeitarmos   qualquer das   hipóteses.*
        is too   soon for   we reject.INF.1PL any   of.the hypotheses
        'It is too soon for us to reject any of the hypotheses.'
     b. *É demasiado cedo* [PP [P para] [CP [C<+declarative ,–finite> ø] [TP *nós*
     rejeitarmos qualquer das hipóteses]]]

(27) a. *É demasiado cedo para que nós rejeitemos   qualquer das*
　　　is too   soon for that we reject.SUBJ.1PL any   of.the
　　　hipóteses
　　　hypotheses
　　　'It is too soon for us to reject any of the hypotheses.'
　　b. *É demasiado cedo* [PP [P *para*] [CP [C<+declarative ,+finite> *que*] [TP *nós*
　　　rejeitemos qualquer das hipóteses]]]

(28) *Esse trabalho é suficientemente perigoso* [CP [C<+declarative ,–finite> *para*] [TP *eu*
　　　não o aceitar]]].

Let us now analyse consecutives with *demais* vs. *demasiado* 'too (much).'
Consecutives including *suficientemente / bastante* 'enough' and
demasiado 'too (much)' typically occur before the gradable predicate, as
illustrated in (29). However, *demais* 'too (much)' must occur after this
predicate, as shown in (30) and (31):

(29) a. *É* {*demasiado/ suficientemente/ bastante*} *cedo   para sairmos*.
　　　is   too (much)/enough/   enough   soon/early for go.out.INF.1PL
　　　'It is {too soon/early enough} for us to go out.'
　　b. *É cedo   {*demasiado/??suficientemente/*bastante} para*
　　　is soon/early   too (much)/ enough /   enough   for
　　　sairmos.
　　　go.out.INF.PL
　　　'It is {too soon/early enough} for us to go out.'

(30) a. *É cedo demais   para sairmos*.
　　　is early too.much for   go.out.INF.1PL
　　　'It is too early for us to go out.'
　　b.**É demais   cedo para sairmos*.
　　　 Is too.much early for   go.out.INF.1PL

Taking these data into account, we will try to adapt Corver's analysis of
antecedent consecutives to the consecutive clauses under analysis in this
section.

　　Considering the connection between these consecutives and the degree
expression, we adopt Kennedy's (1997, 1999) and Corver's (2013)
proposals that the consecutive clause adjoins to DegP. The gradable
predicate is affected by the adverbials *suficientemente* or *bastante*
(meaning 'as much as required') and *demasiadamente* or *demais* (meaning
'too much'), which, despite presenting a quantifier content, as their
English correlates *enough* and *much* (cf. Corver 1997, 2013), also exhibit a

degree meaning, similar to the English degree words *as* and *too* (cf. Corver 1997, 2013). Then, their features are both related to Q and to Deg. Hence, these adverbials must be externally merged in Q, and inherit the features of Deg, by local agreement. Thus, an example like (3), repeated in (31), would be represented as in (32), in what concerns the structure of the consecutive clause:

(31) *Ela é suficientemente forte   para aguentar esse trabalho*.
     she is enough   strong for   stand.INF this work
     'She is strong enough to stand this work.'

(32) [$_{DegP}$ [$_{Deg}$+Deg$_i$]] [$_{QP}$[$_Q$ *suficientemente*$_{<+Deg>i}$] [$_{AP}$ *forte*]]] [$_{PP}$[$_{CP}$
     [$_{C<+declarative ,−finite>}$*para*] [$_{TP}$ *aguentar esse trabalho*]]]

As for the contrasts in (30) and (33), the unavailability of (34) shows that *demais*, like *enough* in English, must be preceded by the gradable predicate.

(33) a. *É cedo demais   para sairmos*.
        is early too.much for go.out.INF.1PL
        'It is too early for us to go out.'
     b. *Ela é esperta demais   para a   conseguires   enganar*.
        she is smart   too.much for CL.3SG manage.INF.2SG fool
        'She is too smart for you to manage to fool her.'

(34) a. **É demais   cedo para sairmos*.
         is too.much early for   go.out.INF.1PL
     b.**Ela é demais   esperta para a   conseguires   enganar*.
          she is too.much smart   for CL.3SG manage.INF.2SG fool

Elaborating on Corver's (1997, 2013) for *enough* in English we admit that in (33) *demais* is externally merged in QP and the gradable predicate has to raise to adjoin to Q. Corver (2013:47-48) shows that some adjectives move higher than Q, raising from Q-to-Deg in degree constructions of many languages (Welsh, Italian, Modern Hebrew, Standard Arabic). Accepting these analyses, we propose that (33a) should be represented as in (35):

(35) *É* [$_{DegP}$ [$_{DegP}$ [$_{Degi}$ *cedo* [$_{Degi}$]][$_{QP}$[$_Q$~~*cedo*~~ [$_Q$*demais*$_{<+Deg>i}$]] [$_{AdvP}$~~*cedo*~~]]] [$_{PP}$ *para*
     [$_{CP}$ [$_{C<+declarative ,−finite>}$ Ø] [$_{TP}$ *sairmos*]]]]

Corver (1997:140) claims that *enough-inversion* is driven by an idiosyncratic property of *enough*. For the moment we will adopt this position for *demais* 'too (much)' in European Portuguese.

In sum, all types of antecedent consecutives under study in sections 2.1 and 2.2 behave like subordinate consecutive clauses and, in their core aspects, may be analysed in a similar way.

3. Free Consecutive clauses

Consecutive clauses also comprise what Giusti (1991) calls consecutives without antecedent or *free consecutives*; Álvarez (1999) includes them in the *peripheral consecutives*. Both authors assume that in these cases, the consecutive is related to the whole previous sentence.

According to Giusti, the free consecutive may occur as an adjunct modifier or as an independent sentence, as in the Italian examples in (36), from Giusti (1991). In contrast, Álvarez (1999: 3765) only presents cases where the consecutive and the quantifying expression occur in juxtaposition to the related clause, as shown in the Spanish example in (37):

(36) a. *Stefano si è   comportato male com il suo vicino,   {tanto/*
     Stefano CL has behaved   badly with the his neighbour, so.much/
     a tal   puncto che l'altro non gli   rivolge più   la parola.
     to such point   that the other non CL.3SG returns anymore any word
     'Stefano behaves badly with his neighbour, so much/ in such a way
     that this one does not speak to him anymore.'

    b. *Lavorò tanto.   Quasi a tal punto che fu per lasciarci la pelle.*
     worked so.much. Almost to such point that was to leave   the skin
     'He worked so much. In such a way that he almost died.'

(37) […] *su penúria de espíritu   se agravaba com los años.*
     her lack   of intelligent got.worst   with the years.
     Tanto   que, quando se   supo   que Bayardo
     So.much that, when   everyone came.to.know that Bayardo
     San Román quería casarse com ella, muchos pensaron
     San Román wanted marry with her, many   thought
     que era perfídia   de forastero.
     that was wickedness of   foreigner
     'Her lack of intelligence got worst with age. In such a way that,
     when everyone came to know that Bayardo San Román wanted to
     marry her, many people thought that it was a foreigner's
     wickedness.'

Giusti claims that the main difference between an antecedent consecutive and a free consecutive is that the former is selected by an adverbial (or adjectival) modifier of an element of the main clause, while the latter may be considered either as an adverbial clause (Giusti 1991:826) in adjunction to the main sentence, which does not depend on any of its elements, as in (36a), or as an independent clause related to a previous independent sentence, headed by the consecutive connector *a tal punt*o 'in such a way', as in (36b), or *tanto* 'so much' (cf. Giusti 1991:829, 831).

Notice that Álvarez takes as peripheral consecutives, sentences like those in (38), where the quantifying expression fronts the consecutive sentence it modifies, forming a discontinuous constituent with the consecutive clause headed by *que* 'that'.

> (38) a. *Tanto   fue un ejemplo su salvación que los franceses*
>   so.much was an example his rescue   that the French
>   *preguntaban cómo se   había hecho*.
>   asked   how CL.3SG had   done
>   'His rescue has been such an example that the French people asked how it had been done.'
>   b. *Hasta tal   punto la mística   está en retroceso que la ciencia*
>   in   such.a point the mysticism is   in retrogress that the science
>   *acude en su apoyo*.
>   goes   in its support
>   'Mysticism is retrogressing so much that the science goes in its support.'

According to our view, not all the examples presented above are instances of free consecutives. This is clearly the case of (38), as evidenced by the fact that the degree/quantifying expressions do not occur next to the consecutive clauses.

In fact, we believe that (38a) and (38b) are instances of finite antecedent consecutives, which differ from those analysed in section 2.1 only by the fact that *tanto* 'so much' and *hasta tal punto* 'in such a way' overtly quantify over the situations expressed by the ~~whole propositions~~, and therefore occupy the first position of the antecedent sentence. The representation in (39) illustrates the analysis proposed for sentences like (38):

> (39) [$_{DegP}$ [$_{DegP/QP}$ {tanto/hasta tal punto} [~~CP/~~TP]] [$_{CP}$ que …]]

We will only take as free consecutives sentences like those in (36) and (37), illustrated for European Portuguese in (40a,b). In these examples, the

free consecutive allows for the recovering of the content of the previous sentence and both can be paraphrased as in (40c):

(40) a. *O   misticismo está em   retrocesso, {a tal   ponto/de tal   modo}*
the mysticism is   in   retrogress, to such   point / in such   way
que a   ciência vai   em seu apoio.
that the science goes in its   support.
'Mysticism is retrogressing, in such a way that science goes in its support.'

   b. *O misticismo   está em retrocesso. {A tal   ponto/de tal   modo}*
the mysticism is   in retrogress. To such   point /in such   way
que a   ciência vai   em seu apoio.
that the science goes in its support
'Mysticism is retrogressing. So much / in such a way that science goes in its support.'

   c. *O misticismo   está em retrocesso. {A   tal   ponto /de tal   modo}*
the mysticism is   in retrogress. To such   point / in such   way
<u>*o   misticismo está em   retrocesso*</u> *que a   ciência vai   em seu apoio.*
the mysticism is   in   retrogress that the science goes in its support
'Mysticism is retrogressing. In such a way is mysticism retrogressing that science goes in its support.'

We assume that in the examples in (40a,b), a paratactic link connects the sentence containing the degree/quantifying expression and the consecutive to the previous related sentence: in (40a) this paratactic relation is graphically marked by the comma; in (40b) the full stop marks that two discursive independent sentences occur in juxtaposition. So, we admit that (40a) and (40b) may be analysed as in (41), where the clause that contains the intensifying words includes an elliptical expression and '||' represents a sentence pause, as in (40a), or a strong discursive break, as in (40b):

(41) *O misticismo está em retrocesso* || {*a tal   ponto/de tal   modo*}
Mysticism   is   in retrogress || to such point/in   such   way
~~*o misticismo está em retrocesso*~~ *que a   ciência vai   em seu apoio.*
is mysticism   retrogressing   that the science goes in its support

Considering the analysis proposed in (41), we assume that the free consecutives in (40) mainly differ from antecedent consecutives like (38), which scope out the whole antecedent sentence, by the fact that the graded antecedent is an elliptical sentence that occurs inside the DegP/QuantP, as represented in (42):

(42) [DegP [DegP/QuantP *de tal modo* [CP ~~*o misticismo está em retrocesso*~~]] [CP [C+decl,+finite *que*] [TP *a ciência vai em seu apoio*]]]

Since the antecedent—of the free consecutive is elliptical, it requires a linguistic context that recovers its content, in the case, the previous sentence.

Notice that the type of paratactic connection that the free consecutive establishes with the previous sentence in (40a), where the free consecutive is separated from the related sentence by a comma, is less clear than the one in (40b), which presents sentence juxtaposition. However, based on the possibility of free alternation of (40a) with the corresponding coordinate sentences with overt conjunctions, we admit that sentences like (40a) are cases of asyndetic coordination. Consequently, we depart from Giusti's (1991), who suggests that the sentence including the free consecutive is an adjunct subordinate adverbial clause (cf. (36a)):

(43) *O   misticismo   está em retrocesso, e/mas* {*a tal   ponto/de tal   modo*}
     the mysticism   is   in retrogress, and/but to such point/in such way
     que a ciência vai   em seu apoio.
     that the science goes in its support.
     'Mysticism is retrogressing, and/but (the misticism is retrogressing) in
     such a way that that science goes in its support.'

In sum, we assume that all cases of free consecutive constructions present a double status, being both hypotactic and paratactic. In fact the expression containing the ~~gradable~~/quantifying expression is modified by a subordinate consecutive clause, but the whole sentence that includes the ~~gradable~~/quantifying constituent and the consecutive is connected to the previous sentence by a paratactic relation of asyndetic coordination or juxtaposition.

The latter property in part explains the impossibility of reversing the order of the sentences or discourse fragments involved:

(44) a. *{*A tal   ponto /de tal   modo*} *que a   ciência vai   em seu apoio*,
        to such point/ in such way   that the science goes in its support,
        o *misticismo está em retrocesso*.
        the mysticism is   in retrogress
     b. *{*A tal   ponto/ de tal   modo*} *que a   ciência vai   em seu apoio*.
        to such point / in such way   that the science goes in   its support.
        O   misticismo está em retrocesso.
        The mysticism is   in retrogress.

However, this analysis must be refined in order to account for sentences like (45), (46) and (47):

(45) *Os estudantes fizeram muitos trabalhos de investigação. Tantos   que*
     the students   made   many   works   of research .   So.many that
     no   fim do   semestre estavam exaustos.
     at.the end of.the semester were   exhausted
     'The students made many research assignments. So many that at the end
     of the semester they were exhausted.'

(46) *Tremem as mãos à   avó.   Tanto   que já   não*
     shake   the hands to.the grandmother. So.much that already not
     consegue escrever.
     can   write
     'Grandmother's hands shake. So much that she cannot write anymore.'

(47) A - *A   epidemia propagou-se   depressa.*
       the plague   spread-CL.3SG   fast.
       'The plague spread fast.'
    B - *Muito depressa?*
      very   fast?
      'How fast?'
    C - *Tanto   que em dois dias a   aldeia ficou   contaminada.*
      so.much that in two days the village became infected
      'So fast that in two days all the village became infected.'

In these examples, the ~~gradable~~ or quantifying word does not intensify the entire elliptical sentence, but some constituent inside it. In fact, the antecedent of the free consecutive is an elided quantified expression that includes the following omitted constituents: the noun phrase *trabalhos de investigação* 'research works' in (45), the verb *tremer* 'shake' in (46), and verbal expression *espalhar* (*depressa*) 'spread (fast)' in (47), as illustrated in (48), for (45) and (47):

(48) a. *Os estudantes fizeram muitos trabalhos de investigação.* [~~*Fizeram*~~
      the students   made   many   works   of research .   Made
      [*tantos ~~trabalhos de investigação~~*]] *que no   fim do   semestre*
      so.many works   of research   that at.the end of.the semester
      estavam exaustos.
      were   exhausted
      'The students made many research assignments. (They made) so many
      (research assignements) that that at the end of the semester they were
      exhausted.'

b. *Tremem as mãos à   avó.*   [*pro tremem* [*tanto*]] *que*
   shake the hands to.the grandmother.   shake   so.much that
   já   não consegue escrever.
   already not can   write
   'Grandmother's hands shake. (They shake) so much that she cannot
   write anymore.'

As shown in (48), *tantos* is a degree/quantifying word that scopes over
NPs, in the case *trabalhos de investigação* 'research assignments' (cf.
(48a)), and *tanto* 'so much' is the core form of the corresponding
quantifying adverbial of the verb.
    The occurrence of (47C) imediatly after *Muito depressa?* 'very fast?'
in (47B) raises a problem: how to explain the invariable form *tanto* that
intensifies the null correlate of the expression *espalhar depressa* 'quickly
spread'? Notice that in (47C), *tanto* 'so much' may only occur when
depressa 'quickly' is not spelled out, otherwise the expression *tão
depressa* 'so quickly' would be required.

(49) a. (*A epidemia propagou-se*) *tanto   que em dois dias a   aldeia*
        (the plague   spread)   so.much that in two days the village
        ficou   contaminada.
        became   infected
        'The plague spead so much that in two days the village became
        infected.'
     b. (*A epidemia propagou-se*) {*tão depressa* / **tanto   depressa*}
        (the plague spread)   {so quickly / so.much quickly}
        que em dois dias…
        that in two days…

Thus, we conclude that in (47C) *tanto* 'so much' is a degree/quantifying
adverbial of the verb *propagar-se* 'to spread', not of the adverb *depressa*
'quickly'.
    Now, considering the expressions *de tal modo* 'in such a way', *a tal
ponto* 'in such a way' *tanto* 'so much' and *tantos* 'so many' in free
consecutive clauses, we believe that they behave much like the
~~gradable~~/quantifying expressions in antecedent finite consecutives.
Similarly, the expressions *de tal modo* / and *a tal ponto* 'in such a way'
may occur in antecedent consecutives as shown in (cf. (38b) and (50a));
when they appear in free relatives they intensify an elliptical
~~gradable~~/quantifying expression (cf. (50b)):

(50) a. *A   menina   está   alta. Está* {*de tal   modo /a tal   ponto*} *alta que*
　　　the little.girl is   tall. Is   in such.a way /to such.a point   tall   that
　　　a   roupa já   não lhe   serve.
　　　the cloth   already not CL.3SG   fit

　　b. *A   menina   está   alta.* {*De tal   modo/a tal   ponto*} [AP *alta*] *que*
　　　the little girl is   tall. In such.a way/ to such.a point   tall,   that
　　　a   roupa já   não lhe   serve.
　　　the cloth   already not CL.3SG   fit
　　　'The little girl is tall. She is so tall that her clothes do not fit her
　　　anymore.'

Finally, notice that in Portuguese the intensifying expressions *de tal modo*,
a tal ponto 'in such a way'*,* may alternate with *de modo tal*, *a um ponto
tal*, which differ from them mainly by the order of occurrence of *tal*, with
respect to *modo* and *ponto*. We take this fact as an evidence for the internal
structure of these intensifying expressions. We assume that *modo* and
ponto are merged in Deg, and *tal* is merged in Q, originating *modo tal,
ponto tal*. Thus, we propose that the expressions *de tal modo* and *a tal
ponto* 'in such a way' are derived in the following way: *modo* and *ponto*
are merged in Deg, *tal* merges in Q and, then, raises to Deg, forming the
complex *tal modo, tal ponto* (cf. (51a)).[6] As for free consecutives starting
with *tanto* 'so much' or *tanto*s 'so many', *tanto(s)* is externally merged in
Q and inherits degree features from Deg (cf. (51b)). In both cases, Q
selects an omitted constituent: a CP, AP, or VP, when intensified by *de tal
modo* and *a tal ponto* 'in such a way' (cf. XP in (51a)); an NP, when the
quantifier is *tantos* 'so many'; an ADVP, when Q is filled by *tanto* 'so
much' (cf. (51b)):

(51) a. [DegP [DegP P$_{de/a}$ [Deg tal [modo/ponto] [QP [Q ~~tal~~] [XP]]] [CP$_{<+finite>}$]]
　　b. [DegP [DegP [Deg +Deg$_i$] [QP [Q tanto(s) Deg$_i$] [NP/ADVP ø]]] [CP$_{<+finite>}$]]

In sum, it is possible to extend the core syntactic approach of antecedent
consecutives to free consecutives and still capture their specificities as
paratactic constructions.

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[6] Notice that this analysis faces the problem of accounting for the position of the
prepositional particles *de* and *a* that occur in the initial position of the intensifying
expressions *de tal modo* or *a tal ponto* 'in such a way'. An alternative derivation
would be the proposed in Corver (1997) for adjectival comparatives in English. In
this case the expression *de tal modo* or *a tal ponto* 'in such a way' would be
directly merged in Deg, and this functional category would select a null Q.

4. Main conclusions

All the constructions we have analysed are consecutive clauses, since they express the semantic dependency characteristic of consecutive clauses: the embedded clause is assumed as the result of the gradable property or the quantifying individual that occurs in the embedding sentence.

In consecutives with overt antecedents, we adopted the split degree hypothesis of Corver (1993, 1997a, b 2013), which has the advantage of separating determiner-like degree word and quantifier-like words. We also adopted Kennedy's (1997, 1999) and Corver's (2013) hypotheses that consecutive CPs are adjuncts that act as modifiers of a DegP, which form a unit with the degree/quantifying word at the level of LF. This analysis has been extended to infinitival and free consecutive clauses.

Three major properties characterise the so called free consecutives: (i) they include a subordinate clause that modifies the elliptical expression affected by the ~~gradable~~ or quantifying expression; (ii) the intensifying expression apparently occurs next to the sentence that contains the consecutive; (iii) the sentence including the ~~gradable~~/quantifying expression and the consecutive establishes a relation of parataxis with the sentence that precedes it.

In consecutives the quantifying expression is understood as applying to a gradable unit, the antecedent of the consecutive. However, in free consecutives this gradable expression is an elided constituent, whose content must be recovered by the sentence to which it is paratactically related.

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