Notes on sentential connections (predominantly) in Portuguese

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Abstract

In this article, we discuss a general typology of inter-sentential connections involving an explicit connective, including but no limited to subordination and coordination. In the first section, we briefly describe a proposal on the topic by one of the authors, which is taken as a point of departure. In the following section, we analyse step by step the diverse levels of organization of the connection system, ending in an overall picture and a suggestion of further additions related to hitherto fully or vastly ignored kinds of data. In the third and final section, we focus on the particular kind of connection that involves the notion of (discourse) "explanation", in order to draw attention to the messy conceptual and descriptive domain it constitutes, particularly in Portuguese linguistics. We aim at demonstrating that a system of well-defined semantic notions, in most cases paralleled by conspicuous syntactic properties, is needed for this and other kinds of connections to be fully understood.

1. A previous account: Peres (1997)

In Peres (1997), the sentential connections acknowledged by the Portuguese official terminology in effect at the time, the Nomenclatura Gramatical Portuguesa (henceforth, NGP)[1], were sub-classified on the basis of five syntactic tests, each of them acting on the output of the application of an inter-sentential connection (that is, on the final total structure, not on the partial subordinate, coordinate or other clause). The tests were: (i) placement

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[1] This linguistic terminology, consisting of a hierarchical list of designations, was in force by law in Portugal between 1967 and 2004, for, among others, language teaching purposes. In 2004, it was replaced by the Terminologia Linguística para os Ensinos Básico e Secundário (henceforth, TLEBS).

as a complement of a verb[2]; (ii) placement as argument of a sentence adverb; (iii) placement under the scope of negation; (iv) movement within the matrix clause; and (v) cleft structure. The results are given in Table 1.

	COMPL.	S-ADV	NEG.	MOV.	CLEFT
conclusivas	–	–	–	–	–
explicativas	–	–	–	–	–
adversativas$_A$[3]	–	–	–	–	–
copulativas	+	+	–	–	–
disjuntivas	+	+	–	–	–
adversativas$_C$	+	+	–	–	–
concessivas	+	+	–	+	–
condicionais$_1$[4]	+	+	–	+	+
condicionais$_2$	+	+	–	+	+
causais	+	+	+	+	+
finais	+	+	+	+	+
temporais	+	+	+	+	+
comparativas	+	+	+	–	–
consecutivas[5]	+	+	+	–	–

Table 1 – Some syntactic properties of complex structures resulting from the coordination and subordination processes of the NGP (from Peres 1997)

In this and the next tables, we use the Portuguese names of the connections listed in the NGP, for two reasons: (i) in some cases, the English tradition

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[2] In the paper under discussion, only verbal complementation was considered, but we now see no reason not to extend the test to nominal and adjectival complementation.

[3] "Adversativas$_A$" ("adversativas$_2$" in Peres 1997) identifies the adversatives with connectives *contudo*, *porém*, and *todavia*, which, according to the battery of tests under analysis, do not give rise to a higher clause in combination with the clause they are attached to. Following terminology to be clarified in section 2.2.2 below, we call them, for the sake of clarity, "attached adversatives" (Port. "adversativas anexas", hence the subscripted "A"). "Adversativas$_C$" ("adversativas$_1$" in Peres 1997) identifies the (apparently) singleton class formed with *mas* (Eng. *but*), an operator that yields a higher clause. This class is dubbed "coordinated adversatives" (Port. "adversativas coordenadas", hence the subscripted "C").

[4] The labels in this and the following line of Table 1 imply the taxonomy established in a manuscript by Peres and Móia circulated as of 1991 – which later developed into Peres *et al*. (1999) –, where a distinction is made between four subtypes of conditionals. We will refer to them in section 2.5 below.

[5] Consecutives will be subclassified in section 2.4.1.1 below.

does not have a simple specific name for some of the connections found in the NGP (e.g., for "explicativas", "conclusivas", and "consecutivas"), and (ii) in some other cases, the English grammatical term that could be used as translation does not have the exact same meaning as the Portuguese one (this is, e.g., the case of "reason" and "causa"). We will also freely use Portuguese designations across the text, whenever this favours clarity.

The values in Table 1 allow the definition of six subclasses within the union set of the coordinating and subordinating connections of the NGP, namely:

(i)   "conclusivas", "explicativas" and "adversativas$_A$";
(ii) "copulativas", "disjuntivas", and "adversativas$_C$";
(iii) "concessivas";
(iv) "condicionais$_1$" and "condicionais$_2$";
(v)   "causais", "finais", and "temporais";
(vi) "comparativas" and "consecutivas"[6].

From this partition of types of inter-sentential connections several conclusions can be drawn, three of which are more salient. The first one is that, in face of their response to the first two tests, conclusive and explicative connections, as the author states, are not to be taken as instances of either coordination or subordination. The motivation for this stance derived from a conception of both these processes that assumed most of what had been said in the literature in this respect (Quirk *et al.* 1985 being a consensual reference) and whose possible addendum in Peres' paper we now formulate in the following necessary condition, which unquestionably discards both conclusives and explicatives from the coordination and subordination sets:

> A clause is combined with another one by either subordination or coordination, only if: (i) besides complying with syntactic criteria, the output can, on the semantic side, be assigned a truth value – that is, only if it conveys a proposition (given one of the possible meanings of this term) – and (ii) if the coordinate or subordinate clause compositionally partakes in the determination of that truth value.

The second major conclusion is that comparatives and consecutives are forms of subordination closer to sentential complementation and modification than to adverbial subordination. Finally, it also derives from the above

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[6] Matos (2003) asserts that "besides movement tests, Peres 1997 resorts to others (scope of sentential negation and focusing in cleft sentences) in order to distinguish explicative sentences from canonical coordinates and from some types of adverbial subordinates" (cf. p. 538, our translation). This hasty statement is entirely insubstantial and untrue, insofar as the two tests referred to by Matos were never given in the abovementioned paper as being able to establish a separation between explicatives and whatever other class. This can be seen by just carefully examining Table 1.

groupings that this latter class is not as uniform as its simple label might insinuate.

2. An enhanced overview of inter-sentential connections

While maintaining the basic picture modelled in Peres (1997), we aim at reviewing some of the positions expressed in this text, and at extending both the classes of connections being scrutinized, and the battery of tests used in distinguishing them. In the end, we will hopefully reach a more comprehensive and fine-grained classification of inter-sentential connections (mostly applying to Portuguese, but predictably with cross-linguistic import). In this main section of the article, we start (in 2.1) by, in very brief and broad terms, circumscribing the kinds of connections we plan to contemplate. In the ensuing subsections (2.2-2.5), we characterize the various oppositions that support our typology proposal. Finally, in 2.6, we draw a general picture of our results, with some final add-ons.

2.1   The vast diversity of inter-sentential connections

The connections between sentences in a text or in discourse belong in different domains of the linguistic system, ranging from pragmatics, across grammar (syntax and semantics), to the material structure of the text. In many cases, a single connection can be characterized in relation to more than one domain.

The pragmatic domain must cover issues like "text type" (in connection with speech acts, as those involved in narrating, question asking and answering, or commanding) and discourse functions (such as, e.g., argumentation, or reasoning). In the grammar domain, at the least the following topics have to be tackled: (i) presence or absence of connectives; (ii) syntactic relations between the connected sentences (constituency, and distinctions between subordination, coordination and apposition); (iii) sentential or non-sentential and propositional or non-propositional status of the connection output, and truth-functionality; (iv) content relations (like, among others, cause, purpose, temporal location, condition, concession, elaboration, background, or parallelism); (v) implicit information (namely, implicature, and presupposition). Finally, in the domain of text (material) structure, the processes of text presentation, ordering, summarising, concluding, rephrasing, correcting, and others, have to be dealt with.

In this article, we are concerned exclusively with inter-sentential connections that involve an explicit operator, thereby excluding, for instance, nearly all the connections so far brought into play in Segmented Dicourse Representation Theory (cf. Asher and Lascarides 2003). Secondly, we restrict ourselves to assertive sentences. Finally, we rule out all connections having to do with material text structure.

2.2   Propositional versus non-propositional connections

We maintain Peres' (1997) claim that an appropriate typology of the connections between sentences involving an operator should, in the semantic and syntactic domain, in the first place set a division between those connections that have a proposition as their output and those that don't. We call the first group **propositional connections** (Port. "conexões proposicionais"), and the second **non-propositional connections** (Port. "conexões não--proposicionais"). These two classes are clearly identified in Table 1, with conclusives, explicatives and attached adversatives making up the second group. However, several clarifications and refinements on some topics are called for, which we take in hand in the following subsections.

2.2.1   Refinements on explicative connections

To start with, we note that Peres (1997) was not fully explicit on complementation matters. In particular, it did not mention that verbal complementation constructions with an explicative clause associated with the complement clause are possible, even if – as the author claims, and we sustain – the sequence formed by the complement and the explicative does not express a proposition of its own. This is shown by the following plainly acceptable sentences, where the square brackets signal the intended interpretation:

(1)   a.   Descartes achou que [existia, dado que pensava]
           Descartes found that [*existed given that thought*]
           'Descartes found that he existed, since/because he could think.'
      b.   o Governo está convencido de que [a economia irá
           the government is convinced of that [*the economy will*
           desacelerar, uma vez que se mantém a subida do preço
           decelerate one time that itself maintains the rise of-the price
           do petróleo]
           of-the oil]
           'The Government is convinced that the economy will slow down, since/because the price of oil keeps rising.'

It must be emphasized that we are interpreting this kind of explicative in terms of the type of connection that Sweetser (1990) named "epistemic causality", a possible (but rather unlikely with the *dado* connective) "content causality" reading being left out (for more details on these classifications, see section 3.1 below). This means that we are concentrating on the reading whereby, e.g., in (1a) the explicative clause *pensava* (*he or she was able to think*) operates as a premise of an incomplete argument which has another (implicit) premise: *se alguém pensa, existe* (*if someone is able to think, he or she exists*). With this kind of interpretation, the sentences in (1) can be processed with the explicative clause inside the sentential complement of the higher predicate

(*achar*, and *convencido*). For example, the corresponding reading of (1a) can be conveyed, but not exactly paraphrased, in the following terms (in English, if we may): *Descartes found that he existed, and he reached this conclusion based on the evidence that he could think*. Similarly, the relevant interpretation of (1b) could translate as follows: *the Government is convinced that the economy will slow down, and it reached this conclusion based on the evidence that oil prices keep rising*. In spite of this, and in accordance with Peres' (1997) claims, it is undisputable that the bracketed sequences in (1) cannot be assigned a truth value, insofar as they don't express a proposition. Instead, since they express an argument, they can only be evaluated in terms of validity.

In accordance with the just described semantic status of explicatives, these clauses don't partake in the determination of the truth value of the complement clause they are appended to – *existia* (*he existed*), and *a economia irá desacelerar* (*the economy will slow down*) in (1a-b), respectively – and, as a consequence, they likewise play a null role in the determination of the truth value of the highest clauses (in the examples above, with main predicates *achar*, and *convencido*, respectively). In sum, although explicatives can be adjoined to sentences that are complements of verbs or other predicates, they are not semantically in the complementation relation, acting more in the way of externally added information.

A second refinement, related to a domain very close to complementation, is targeted at the fact that the aforementioned paper does not recognize that sentential adverbs do not systematically (obviously, depending on their meaning) rule out constructions containing an explicative clause:

(2)   felizmente, [o Pedro tem agora hipótese de acabar o curso,
       fortunately the Pedro has now chance of finish the course
       [dado que foi criada uma linha de crédito especial para o efeito]]
       given that was created one line of credit especial for the efect
       'Fortunately, Pedro now has a chance to finish his degree, since a line of credit has been opened for that particular purpose.'

Once again, for our objectives, only the aforementioned Sweetser's epistemic interpretation is relevant in analyzing this sentence, a possible content reading being disregarded. Given this restriction, the explicative clause is not, as the bracketing suggests, supplying a premise leading to a conclusion that would have *felizmente* as its higher predicate (as represented in [[*felizmente, o Pedro tem agora hipótese de acabar o curso*], [*dado que foi criada uma linha de crédito especial para o efeito*]]). However, this fact does not legitimate the inference that, in a different net of dependencies, the sentential predicate *felizmente* takes the rest of the construction as its complement, in a way that assigns it (interpretational) scope over the explicative clause, even if mediated by the supposed "main" clause. This cannot be the case for the very simple

reason that in (2) the semantic value of the explicative does not partake in the determination of the truth-value of the complement of the sentential adverb.

In our view, none of the two pieces of evidence discussed in this subsection is sufficient to motivate the linking of explicative clauses with either coordination or subordination (which, as shouldn't be forgotten, aren't the only means to combine sentences into texts). Much to the contrary, we think that additional cogent arguments can be adduced in favour of the non-propositional nature of the connection at issue. One of them is exhibited in the subsequent data, which corroborate, at a discourse level involving dialogue, the idea that explicatives do not give rise to a proposition, but to an argument instead:

(3) a. ANA'S UTTERANCE:
        – O Pedro deve ter saído, porque não o vejo em lado nenhum.
        the Pedro must have left because not him see in side none
        'Pedro must have left, because I can't see him anywhere.'

    b. AN INADEQUATE REPLY:
        – # O que disseste é falso.
        the that said is false
        'What you said is false.'

    c. AN ADEQUATE REPLY:
        – O que disseste é ilógico / incongruente / não faz sentido.
        the that said is illogical / incongruent / not makes sense
        'What you said is illogical / incongruent / doesn't make sense.'

2.2.2 *Movement as a sieve within non-propositional connections*

We now engage in a considerably more far-reaching revision of Peres (1997), bearing on the typology we seek. Noticeably, the author was mistaken in the claim that explicatives don't allow movement. Witness the following data (of course, keeping in mind the unquestionable Sweetser's epistemic reading):

(4) a. O Governo, uma vez que tem de reduzir o défice, deve
        the government, one time that has of reduce the deficit, may
        aumentar alguns impostos.
        raise some taxes
        'The Government, since it needs to reduce the deficit, will probably raise some taxes.'
    b. Uma vez que tem de reduzir o défice, o Governo deve
        one time that has of reduce the deficit the government may
        aumentar alguns impostos.
        raise some taxes
        'Since it needs to reduce the deficit, the Government will probably raise some taxes.'

Apparently, non-final positions aren't equally easy for all operators (e.g., *pois que tem de reduzir o défice, o Governo deve aumentar alguns impostos* may sound a bit awkward), but we believe some of these differences may well be less a matter of grammar than of style and register. With some connectives, though, non-basic positions appear to be entirely proscribed, as noticed by several authors, among which Lobo (2003). The most dramatic case seems to be bare *que*, to be compared with, e.g, *uma vez*, *dado* ou *já*, all followed by *que* (whose status isn't and should be clarified):

(5) a. A certidão deve estar pronta, *uma vez que* a pedi com urgência.
     the certificate should be ready, one time that it asked with urgency
     'The certificate should be ready, since I asked for it to be done urgently.'
   b. A certidão, *uma vez que* a pedi com urgência, deve estar pronta.
   c. *Uma vez que* a pedi com urgência, a certidão deve estar pronta.

If *dado* is chosen, the possibilities are the same, but with *já* the initial position seems to be disallowed, imposing an interpretation shift. As for *que*, such position is definitely ruled out[7]:

(6) a. A certidão deve estar pronta, *que* eu pedi-a com urgência.
     the license should be ready, that I asked it with urgency
     'The license should be ready, since I asked for it to be done urgently.'
   b. A certidão, *que* eu pedi-a com urgência, deve estar pronta.
   c. **Que* eu pedi-a com urgência, a certidão deve estar pronta.

No data need to be provided in order to demonstrate that the movability of explicatives does not extend to the other non-propositional connections considered in Peres (1997), namely conclusives and attached adversatives.

We consider the evidence on the movement of explicatives to be a very relevant element for subclassifying the non-propositional connections being considered here, as these are split into two groups according to whether or not they accept movement: explicatives, which do, and conclusives and attached adversatives, which don't.

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[7] It seems to be worth considering the hypothesis that this *que* ultimately is a sort of complementizer, originally without proper semantic content (comparable to several others, for example the one that grammaticalized together with the connective *por*, giving *porque*, to introduce finite – but obviously not non-finite – causal subordinate clauses), but that came to play various roles in the area of causality (in the loosest possible sense). This would explain its abhorrence of the initial position.

Regarding explicatives, we suggest that their place lies within the pool of sentential structures that Huddleston and Pullum (2002) call "**supplement-ation**" (Port. "suplementação")[8]:

> "We use the term supplementation for a construction containing an **anchor** and a **supplement**, an element related semantically to the anchor but not integrated into the syntactic structure as a dependent. Supplements are detached prosodically from the anchor, typically having the character of an interpolation or an appendage (an element added loosely at the beginning or end of a clause). (…) As mentioned (…), we include under this heading what are traditionally called non--restrictive relative clauses." (cf. pp. 66-67)

Regarding the last statement in the above quotation, we are assuming that the authors are taking as forms of supplementation both nominal and sentential non-restrictive relatives (like the bracketed sequences in *my brother,* [*who is a musician*]*, lives in London* and *John missed the party,* [*which surprised me*], respectively). Nevertheless, for lack of time and space, we will not in this text commit ourselves to a classification of non-restrictive relatives other than the sentential type, instead leaving the issue open.

Still with respect to relative clauses, we take the opportunity to emphasize that, in opposition to some grammars, we don't consider appositions to sentences like the bracketed part of *vai chover,* [*coisa que me aborrece*] as sentential relatives. In this sentence, the sequence *coisa que me aborrece* is a nominal construction containing a nominal relative clause (applied to the noun *coisa*) being employed as a predicate on a sentence, with the status of an apposition (notice that it could even have a determiner – *uma coisa que me aborrece*). Such apposition plays the same role as a nominal apposition without a relative, as in *vai chover, coisa aborrecida*.

Besides explicatives and sentential non-restrictive relatives, the properties that characterize the supplementation class equally apply to the clauses that the Nomenclatura Gramatical Brasileira[9] (hereafter, NGB) calls "conforma-tivas" (that, is, clauses expressing conformity between a situation being represented by a sentence and, inter alia, a prediction on that situation, as in *everything went well, <u>as I had predicted</u>*). Accordingly, we also include them in the class of supplements. Applying only to inter-sentential connections, supplementation possibly constitutes only a part of the trans-categorial mode of connection known as "apposition".

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[8] For those who are fond of opaque Greek terminology, let it be said that supplements are clearly more on the **parataxis** than on the **hipotaxis** side. Incidentally, besides "suplemento", a good (and, albeit formal, not archaic) Portuguese translation for "supplement" would be "aditamento", which very accurately conveys the spirit of Huddleston and Pullum's definition.

[9] The Nomenclatura Gramatical Brasileira, was enforced by legal ruling in 1959, therefore preceding and inspiring the Portuguese version.

As to conclusives and attached adversatives, they are joined in a connection mode we dub **attachment** (Port. "anexação"). This term, deliberately chosen for its purported vagueness, aims at conveying the idea that the relevant operator establishes a semantic link without a syntactic counterpart, that is, without adding syntactic structure[10]. Table 2 gathers some of the two kinds of non-propositional connections described in this section, with values on the properties considered in Table 1. So obvious is the behaviour of attachments with respect to these properties that we pass over discussing or illustrating it. As for supplementation, we just recall the previous observations on explicatives so as to underline the null role of supplements in the determination of the truth value of the host clause ("host", rather than "matrix", expressing here a syntactically more "detached" connection). In addition, a word is due on the "plus or minus" symbol assigned to "relativas de frase" (Eng. "sentential relatives") in the movement test column. By this ambiguous marking we mean to express the fact that sentential relatives are not as movable as the other supplements, in particular rejecting the front position[11].

			COMPL.	S-ADV.	MOV.	NEG.	CLEFT
non-propositional connections	attach.	*conclusiva*	–	–	–	–	–
		adversativa anexa	–	–	–	–	–
	suppl.	*relativa de frase*	–	–	±	–	–
		conformativa	–	–	+	–	–
		explicativa	–	–	+	–	–

Table 2 – A sample of non-propositional connections between sentences

We dare not say that the subclasses of supplements are exhausted in Table 2, but, truth to tell, no others come to our mind at the moment. On the contrary, we can think of numerous kinds of attachment operators and attached clauses other than conclusives and attached adversatives. We recuperate some examples from Peres (1997), using now English equivalents of the sub-classification labels they were assigned there: "consequential" – *daí / de modo* (*hence*, *so*); "copulative" – *ademais*, *além disso* (*besides*, *furthermore*, *moreover*); "contrastive" – *ao invés*, *pelo contrário* (*on the contrary*); "rectifying" – *ou antes*, *ou melhor* (*better*, *or rather*); "confirmatory" – *de facto*, *com efeito*, *efectivamente*, *na realidade*, *na verdade* (*in fact*, *as a matter of fact*, *indeed*, *actually*, *in effect*, *in reality*, *in truth*).

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[10] The fact that an operator is required in attachment distinguishes it from what is called, in some grammatical traditions, "juxtaposition".

[11] It goes without saying that nominal non-restrictive relatives do not enjoy the same movement capacity as the sentential brand.

2.2.3 Combining coordination and non-propositional connectives

In this subsection we look into another interesting feature that appears to distinguish attachment and supplementation. Compare the data in the following pairs:

(7) a. Há muitas nuvens no céu; *portanto*, vai chover.
    exist many clouds in-the sky; hence, will rain
    'There are many clouds in the sky; therefore, it will rain.'
  b. Há muitas nuvens no céu *e, portanto*, vai chover.
    exist many clouds in-the sky and, hence, will rain
    'There are many couds in the sky and, therefore, it will rain.'

(8) a. Ele disse que enviava a mensagem; *de facto*, enviou.
    he said that send the message; of fact, sent
    'He said he'd send the message; in fact, he did.'
  b. Ele disse que enviava a mensagem *e, de facto*, enviou.
    he said that sent the message and, of fact, sent
    'He said he'd send the message and, in fact, he did.'

In (7a) and (8a) the texts contain a "main" clause to which a conclusive and a confirmatory clause, respectively, are attached. The same is not the case with (7b) and (8b), which involve two processes: one is copulative coordination between two clauses (performed by the connective *e*), the other is formally an interpolation materialized by the operators *portanto* and *de facto*[12]. The radical difference in meaning between the two interpolations is not of concern now, but it should nevertheless be stressed that in both cases the coordinated clause has to be computed with the attachment operator, which, in the conclusive case, means that the coordinated sentence is the conclusion that *portanto* requires.

If we perform the same exercise with instances of supplementation, coordination is disallowed:

(9) a. Vai chover, visto que o céu está muito nublado.
    will rain, seen that the sky is very clouded
    'It will rain, since the sky is very clouded.'
  b. *Vai chover <u>e</u> visto que o céu está muito nublado.
    will rain and seen that the sky is very clouded

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[12] Upon presenting examples similar to (8b), Duarte (2003) states that Peres (1997) does not consider them as instances of a "frase composta" (compound or complex sentence) – cf. p. 95. This constitutes a misrepresentation of what the paper says. The claim therein is that sentences connected by operators like *portanto* or *de facto* – as in (7a) and (8a), respectively – don't give rise to another sentence, but nothing of the kind is stated with respect to texts also involving sentential coordination, which obviously is the case in (7b) and (8b).

(10) a. Vai chover, o que me aborrece.
         will rain, the that me annoys
         'It will rain, which annoys me.'
     b. *Vai chover <u>e</u> o que me aborrece.
         will rain and the that me annoys

(11) a. Vai chover, conforme estava previsto.
         will rain, as was predicted
         'It will rain, as predicted.'
     b. *Vai chover <u>e</u> conforme estava previsto.
         will rain and as was predicted

The ungrammatical construction in (11b) is, of course, not to be confused with those – not of concern here – containing manner adverbial clauses with the same connective forms, which are pure cases of coordination with ellipsis:

(12) a. Vai chover e (vai chover) conforme estava previsto
         will rain and will rain as was predicted
         (isto é, a cântaros).
         (*this is, at jars*)
         'It will rain, and (it will rain) as predicted (that is, cats and dogs).'
     b. Eles reagiram e (reagiram) conforme estava previsto
         they reacted and (reacted) as was predicted
         (isto é, sem pressa e com calma).
         (*this is, without rush and with calm*)
         'They reacted, and (they reacted) as predicted (that is, calmly and with no hurry).'

The proposed distinction between attachment and supplementation is in compliance with the facts on coordination that were just described. Actually, it is predictable that supplements, being inserted into an internal position of a sentence cannot be also coordinated to it. As for the attachment cases – conclusives and attached adversatives –, where the attached form is fully external to the sentence it relates to in the basic form, as in (7a) and (8a), it appears that the language prodigally provides for an extra coordination format, as in (7b) and (8b), with all the identifying properties of such a mode of connection, including the role of verb complement, in data like the following, which we, the first author warmly, the second somewhat coldly, accept:

(13) creio [que [o colóquio foi um êxito e, portanto, devemos celebrar]]
      believe that the conference was a success and, hence, must celebrate
      'I believe that the conference was a success and, hence, we must celebrate.'

About the real syntactic nature of the operators *e*, *portanto* and *de facto* occurring in (7b) and (8b), one could hypothesize, as some authors do, that the sequences [*e portanto*] and [*e de facto*] (in square brackets, for the sake of perspicuity) constitute semantic and syntactic units, that is, that they are special coordination operators inducing – by implicature, in the conclusive variety – a particular value besides that of the copulative *e*. However, the data in (14) below suggest precisely the opposite view, namely that the non- -copulative operator is independent from the other operators. We will not further elaborate on this point here.

(14) a. Creio que o colóquio foi um êxito e, portanto, devemos celebrar.
         believe that the conference was a success and, hence, must celebrate
         'I believe that the conference was a success and, hence, we must celebrate.'

     b. Creio <u>que</u> o colóquio foi um êxito <u>e que</u>, <u>portanto</u>,
         believe that the conference was a success and that, therefore,
         devemos celebrar.
         must celebrate
         'I believe that the conference was a success and that, therefore, we must celebrate.'

     c. Creio <u>que</u> o colóquio foi um êxito <u>e que</u> devemos,
         believe that the conference was a success and that must,
         <u>portanto</u>, celebrar.
         therefore, celebrate
         'I believe that the conference was a success and that we must therefore celebrate.'

     d. Creio <u>que</u> o colóquio foi um êxito <u>e que</u> devemos
         believe that the conference was a success and that must
         celebrar, <u>portanto</u>.
         celebrate, therefore
         'I believe that the conference was a success and that we must therefore celebrate.'

2.3   *Coordination versus subordination*

We now turn to the next opposition, that between coordination and subordination. In order to avoid unnecessary complexity at this point, we will look more closely into so-called adverbial subordination, inasmuch as the borderline that really matters is that between coordination and adverbial subordination, not between coordination and complementation or modification subordination. The latter varieties will only be more minutely considered in the next section, as contrasting, within subordination, with the adverbial kind, and again, in section 3.5, where we bring together all the connections we analyzed before.

We don't have much to say on the opposition between coordination and adverbial subordination, considering the abundant and convincing literature on the matter (from Ross 1967 to the overviews in Quirk *et al.* 1985, and, concerning Portuguese, Mateus *et al.* 2003, which closely follows that English grammar, and Lobo 2003). Accordingly, we could leave the picture as it was in Peres (1997), where the immovability of coordinate sentences was the distinctive feature of coordination (disregarding, as we do here, parenthetical insertion of coordinates, which is a totally different matter). To be more precise, since movement is also blocked in some non-propositional connections, namely in attachment, we should instead say that the blocking of movement is the distinctive feature of coordination within the class of propositional connections, except for the special cases of sub-nominal, i.e. adjectival, subordination, and of comparatives and consecutives (whose immovability, as already pointed out in Peres (1997), is justified by their grammatical identity[13]). In fact, as shown in Table 1, complementation and the application of sentential adverbs don't play any role in the distinction between sentential coordination and subordination (of any kind, for that matter). As for cleft constructions, their inapplicability to concessives suffices to prevent the test from being a sieve regarding the two major modes of propositional connection. For different reasons, also negation, a more intricate case we will address below, is useless in this respect.

Notwithstanding the apparent sufficiency of movement – parentheticals excluded, we insist – to tell apart coordination from adverbial subordination, we want to bring forward a second syntactic feature, recurrently mentioned, among others, in the literature: the compliance of complex sentences formed by coordination with the Coordinate Structure Constraint defined in Ross (1967), which establishes that certain syntactic processes must equally affect all coordinated sentences. For example, in (15a) below, *wh*-extraction is carried out only at the level of the main clause, without involving the adverbial subordinate, while in (15b) the same kind of process is not allowed regarding the two coordinated sentences. In the case of coordination, only structures like (15c), where the syntactic process at issue identically affects both coordinates, are allowed[14]:

(15) a. Com quem falaste ∅ antes de a Jane chegar?
       with whom talked ∅ before of the Jane arrive?
       'Who did you talk to ∅ before Jane arrived?'
     b. *Com quem falaste ∅ e a seguir a Jane chegou?
       with whom talked ∅ and then the Jane arrived?
       '*Who did you talk to ∅ and then Jane arrive/arrived?'

---

[13] Such identity absolutely precludes their classification as "adverbial", if this term is to literally mean something. We return to this point in section 3.2.3 below.
[14] The English versions are taken from McCawley (1998: 268).

  c. Que teoria é que o Tom atacou ∅ e a seguir a Jane defendeu ∅?
     *which theory is that the Tom attacked ∅ and at follow the Jane
     defended ∅?*
     'Which theory did Tom attack ∅ and then Jane defend ∅?

Table 3 portrays the values of the classes of coordination and of (again, erroneously) so-called "adverbial subordination" found in the NGP, with respect to movement and the coordinate structure constraint. The subclassification is clear-cut, with the understandable exception of comparatives and consecutives with regard to movement (the explanation of which we will take in hand in the next section).

			CSC	MOVEMENT
propositional connections	coordin.	*copulativa*	+	−
		disjuntiva	+	−
		adversativa coordenada	+	−
	"adverbial" subordination	*concessiva*	−	+
		condicional[15]	−	+
		causal	−	+
		final	−	+
		temporal	−	+
		comparativa	−	−
		consecutiva[16]	−	−

*Table 3 – Two distinctive features of coordination
and genuine adverbial subordination in Portuguese*

2.4 Major subordination classes

In this section, we introduce a primary partition in the realm of subordination together with suitable tests. In order to reach as wide as possible a coverage of this mode of sentential connection, we will consider all the kinds of subordination included in the NGP: complement clauses (in a wide sense, that includes subject clauses), modification clauses (restricted to relatives), and adverbial clauses (in the NGP, subordinação "substantiva", "subordinação "adjectiva", and "subordinação "adverbial", respectively). Before submitting our proposals, we feel the need to clearly establish our concept of consecutive and comparative clause (in 2.4.1). Next, we will

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[15] Reminder: conditionals will be subclassified in section 2.5 below.
[16] Reminder: consecutives will be subclassified in section 2.4.1.1 below.

supply a semantic criterion for the subclassification of subordinate clauses
(2.4.2). Subsequently, some terminology will be put forward (2.4.3). We will
then describe what we take to be a crucial syntactic test (2.4.4). Finally, two
major subclasses of subordination will be set up (2.4.5).

2.4.1   A preliminary step: identifying structures

2.4.1.1 Consecutive clauses

First of all, consecutive clauses are not to be confused with the non-proposi-
tional type labelled "consequencial" in Peres (1997), exemplified in the bracketed
appended sentence in *os sócios já conversaram,* [*de modo que o problema está
resolvido*] (*the partners have already talked,* [*the problem having thus been
solved*]). Consecutives are possibly the most intricate of all sentential connections
as regards configuration. Pending a more detailed scrutiny of this matter, we need
to point out now that, on one side, consecutive clauses operate at various syntactic
levels, and that, on the other, they cannot be (at least uniformly) considered as
"adverbial". In what follows, we present various subtypes of consecutive clauses,
annotated with very tentative parenthetic structuring. The first group of sentences
shows that some consecutives have to be computed in the degree component of an
adjectival phrase. We call them **adjectival degree consecutives**:

(16) a. estive em [sítios [*tão bonitos que apetecia lá ficar*]]
　　　 was in [*places* [*so beautiful that felt-like there stay*]]
　　　 'I was in such beautiful places that I felt like staying there.'

　　 b. [edifícios [*tão seguros que resistam a qualquer sismo*]]
　　　 [*buildings* [*so safe that resist to any earthquake*]]
　　　 custam muito caro
　　　 cost very expensive
　　　 'Buildings so safe that can resist any earthquake are very costly.'

　　 c. construíram-se [edifícios [*tão seguros que resistem a qualquer*
　　　 were-built [*buildings* [*so safe that resist to any*
　　　 sismo]]
　　　 earthquake]]
　　　 'Buildings so safe that can resist any earthquake were built.'

　　 d. ele é [*tão competente que seguramente descobre uma solução*]
　　　 he is [*so competent that surely finds a solution*]
　　　 'He is so competent that he'll surely find a solution.'

In the second subclass, the consecutive clause stands within the modifier of
a noun, as in the previous group, but with two crucial differences: (i) instead of
degree, we have something like, in informal terms, a "quality distinction value"
(cf. *tal forma / forma tal*); (ii) the noun is part of a prepositional phrase with
adverbial function. We call these clauses **nominal quality consecutives**:

(17) a. ela [falou [de [forma [*tal que encantou toda a gente*]]]]
     she [spoke [of form [such that charmed all the people]]]]
     'She spoke in such a way that she charmed everyone.'
  a'. ela [falou [de *tal* forma *que encantou toda a gente*]]
     she [spoke [of such form that charmed all the people]]
     'She spoke in such a way that she charmed everyone.'

The third subclass involves what some authors consider to be an application of the category of degree to nouns (but that others would take as a form of reduced adjectival degree). We call these clauses **nominal degree consecutives,** and, this time, pending more research on the matter, the brackets are dispensed with:

(18) a. Tive uma alegria *tal que chorei.*
     had a joy such that cried
     'I had such a joy that I cried.'
  b. Deu-me uma fúria *tamanha que gritei.*
     gave-to-me a fury so-big that yelled
     'I flew into so big a rage that I yelled.'

The fourth group illustrates consecutives that are part of the degree component of an adverbial phrase. These we call **adverbial degree consecutives**:

(19) a. [edifícios [*tão bem* construídos *que resistam a qualquer sismo*]]
     [*buildings [so well built that resist to any earthquake*]]
     custam muito caro
     cost very expensive
     'Buildings so well built that can resist any earthquake are very costly.'
  b. o prédio está construído [*tão bem que resiste a qualquer sismo*]
     the building is built [so well that resist to any earthquake]
     'The building is so well built that it can resist any earthquake.'
  b'. o prédio está [*tão bem* construído *que resiste a qualquer sismo*]
     the building is [so well built that resist to any earthquake]
     'The building is so well built that it can resist any earthquake.'
  c. a ponte foi concebida pelos engenheiros [*tão bem que resiste*
     the bridge was conceived by-the engineers so well that resists
     a qualquer sismo]
     to any earthquake
     'The bridge was so well conceived by the engineers that it can resist any earthquake.'

c'. a ponte foi [*tão bem* concebida pelos engenheiros *que resiste*
    the bridge was [*so well conceived by-the engineers that resists*
    a qualquer sismo]
    to any earthquake
    'The bridge was so well conceived by the engineers that it can
    resist any earthquake'

In the fifth subclass, the consecutive clause stands within a phrase expressing adverbial quantity. We call them **adverbial consecutives**, and again take the precaution of skipping the brackets:

(20) a. Ele correu *tanto que ficou exausto.*
        he ran so-much that became exhausted
        'He ran so much that he was exhausted.'

In the sixth (*caveat*: not final) group, the consecutive is licensed (or triggered) by the quantificational component of a noun phrase, while not being a part of it. Let us call them **nominal quantity consecutives**:

(21) a. [[*tanta* gente fala no assunto] [*que já deixou de ser segredo*]]
        [[*so-many people talk in-the issue*] [*that already ceased of be secret*]]
        'So many people talk of that issue that it isn't a secret anymore.'
     b. [[considerei *tantas* hipóteses] [*que já me sinto perdido*]]
        [[*considered so-many hypotheses*] [*that already feel lost*]]
        'I considered so many options that I now feel lost.'
     c. [[visitei *tantas cidades*] [*que já não me lembro de algumas*]]
        [[*visited so-many cities*] [*that already not myself remember of some*]]
        'I visited so many cities that I can't remember some anymore.'

The picture of consecutives we have just given is undoubtedly mixed and complex, raising various problems, namely about constituency. One of them regards the connection between the consecutive clause and the special expression it interacts with (*tão, tanto*, *tal*, and *tamanho*, or its gender or number varieties, in the examples above) – let us call this expression, for the sake of clarity, the "consecutive trigger". Together with this, comes the issue of the syntactic level of attachment of the consecutive clause itself (without the trigger), which in (21) appears to be a higher level than in the other cases (possibly, the sentence level).

An additional sort of consecutive, as exemplified in the following data, wasn't as yet mentioned:

(22) a. Estava muito calor, *tanto que não se podia sair de casa*.
       was a-lot-of heat, so-much that not one could exit of home
       'It was very hot, so much so that one couldn't leave home.'
    b. Muitos estudantes quiseram assistir à conferência, *tantos*
       many students wanted attend at-the conference, so-many
       que não couberam na sala.
       that not fit in-the room
       'Many students wanted to attend the conference, so many that
       they didn't fit in the room.'
    c. Houve muitas ofertas de ajuda, *tantas que não podemos*
       existed many offers of help, so-many that not can
       aceitar todas.
       accept all
       'There were many help offers, so many that we can't accept them
       all.'
    d. Foram ditas muitas coisas, *tais que fiquei perplexo*.
       were said many things, such that became baffled
       'Many things were said; such things, that left me baffled.'

Clearly, the examples in (22) differ from those in (16)-(21) in several respects.
We will just point out that the consecutive structure (i.e., trigger plus clause),
is now obligatorily continuous and is applied to another clause, in a way that
pretty very much resembles a non-restrictive relative clause. Given that
diverse analyses are possible for these clauses, and that we cannot go deeper
into this subject now, we will not label them nor include them in our final
overview in section 3.5.

To end up this brief scrutiny of consecutive clauses, the possibility of
combining different kinds is worth noting:

(23) a. estavam na reunião [*tantas e tão diferentes*] pessoas *que*
       were in-the meeting [*so-many and so different*] *people that*
       se tornou difícil discutir
       it became difficult argue
       'There were so many and so different people at the meeting that it
       became hard to argue.'
    b. considerei [*tantas e tais*] hipóteses *que já me sinto perdido*
       considered [*so-many and such*] *hypotheses that already feel lost*
       'I have considered so many options and of such kinds that I now
       feel lost.'
    c. ela falou [*tanto e* de forma *tal*] *que encantou toda a gente*
       she spoke [*so-much and of form such*] *that charmed all the people*
       'She spoke so much and in such a manner that she charmed
       everyone.'

2.4.1.2 Comparative clauses

Regarding comparative clauses, we adopt the general characterization given in Marques (2004) – cf. also in this volume – where a comparative clause is required to involve three ingredients: comparison, degree, and subordination. Accordingly, and in disagreement with most Portuguese grammars, we don't take constructions like the following (to which other structural types could be added) as containing instances of comparative subordination:

(24) a. Ele reagiu como um adulto.
        he reacted like a adult
        'He reacted like an adult.'
     b. Ela gosta de escrever, (tal) como a mãe.
        she likes of write (such) like the mother
        'She enjoys writing, (just) like her mother.'

In (24a), *como um adulto* is a manner adverbial phrase that, in the final realization, coincides with the free relative clause it contains. This sort of structure involves comparison and subordination, but no degree. As to (24b) – which, without the comma, and (preferably, if not solely) without the anaphoric element *tal*, can have the same manner interpretation as (24a) – it is also a no degree case, seemingly closer to supplementation than to subordination. It certainly deserves the minute attention that cannot be granted here.

We can't help leaving a final note on the closeness between consecutives and comparatives, which two facts attest. First, the similarity of syntactic embedding: comparatives are inserted at most if not all the syntactic levels enumerated for consecutives in the previous section. Secondly, consecutives and comparatives can be combined in a single compound structure, as these data show:

(25) a. A funcionária é tão mais simpática do que o colega que
        the clerk is so-much more nice of what her colleague that
        toda a gente se lhe dirige.
        all the people themselves to-her go
        'This clerk is so much nicer than her colleague that everyone goes to her.'
     b. Este produto é tão menos prejudicial para o ambiente do que
        this product is so-much less harmful to the environment of what
        os de outras marcas que toda a gente o devia comprar.
        those of other brands that all the people it should buy
        'This product is so much less harmful to the environment than those of other brands that everyone should buy it.'

c. Os habitantes da cidade são hoje tão mais numerosos do
   the inhabitants of-the city are today so-much more numerous of
   que há dez anos que começam a surgir problemas
   what there- is ten years that start to arise problems
   de alojamento.
   of housing
   'The inhabitants of the city are nowadays so much more than they were ten years ago that housing problems begin to arise.'

2.4.2 *A semantic criterion: truth-functionality*

From a semantic viewpoint, it is obvious that complex sentences formed with sentential complements, sentential modifiers (restrictive relative clauses, gerundives, and other), consecutive clauses (in the NGP sense) and comparative clauses constitute a firmly distinctive class due to the fact that they cannot be assigned a truth value independently of the semantic content of the subordinate clause. As a matter of fact, without the subordinate part, they become incomplete structures that either do not constitute real sentences or are totally different in meaning from those including the subordinate. We will exemplify these nowadays trivial ideas with only the case of verbal complementation and relative clauses.

Concerning **sentential complements**, traditional grammars generally considered that, in a sentence like *o Pedro disse que a Ana é simpática* (*Pedro said that Ana is nice*), the sequence *o Pedro disse* (*Pedro said*) was by itself a clause, the "main clause" (Port. "oração principal", or, after 1967, "oração subordinante"). This represents a gross mistake, inasmuch as a sequence like *Pedro said* is an incomplete structure that does not form a sentence (of course, ignoring, as was the practice in traditional grammar, admissible empty positions), and cannot, therefore, be either true or false[17].

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[17] Several grammars published over the last two decades have adopted a proper view on this matter – for example, Quirk *et al*. (1985), Perini (1995), and Huddleston and Pullum (2002). Bechara (1999) clearly assumes an appropriate analysis of the relation between a sentential complement and the host sentence, but does not propose a matching terminology (cf. p. 462). The same is the case with Mateus *et al*. (2003: 596). Neves (2000) is not clear about the coverage of the term "oração (…) matriz ou principal, na denominação tradicional" ("(…) matrix or main clause, in traditional terms", our translation) as regards complementation, but apparently the modern view is implied (cf. pp. 335 ss.). However, in the section on adverbial clauses, the "main clause" is taken to be what is left upon suppressing the adverbial part, which casts some doubt on the real value being assigned to the label "main". Appallingly, the TLEBS (the 2004 official Portuguese terminology) imposes the most inaccurate and outdated stance on this subject, by defining "oração subordinante" ("subordinating clause") as the "porção da frase complexa que exclui todas as **subordinadas** nela encaixadas" ("the portion of the complex sentence that excludes all subordinates therein embedded").

As for **restrictive relative clauses**, a sentence like – in English, for an inconsequential change – *most children who live in rich countries own a computer* suffices to show that the suppression of the relative clause (*who live in rich countries*) gives way to a new sentence that by no means is contained in the first, namely *most children own a computer*. Accordingly, a restrictive relative clause cannot be considered as a segment that is appended to another sentence[18].

Contrary to what happens with the subordinate structures we have been considering, if a (genuine) so-called **adverbial subordinate clause** (with the obvious exclusion of the mistakenly so classified comparatives and consecutives) is suppressed, the result is a sentence that is part of the whole structure of which the adverbial is a component and that keeps its essential meaning untouched. For instance (again, with English data) *Mary left the party* is (syntactically and semantically) included in *Mary left the party because she was tired*, or *Mary left the party when she felt tired*. In the case of conditionals, the semantic and syntactic facts are basically the same, although a clear (at least) pragmatic difference arises with the suppression. Witness the pair *Mary will go to Graduate school if she gets financial support* and the bare *Mary will go to Graduate school*. It is quite obvious that the conditional lends the other clause a modal value of uncertainty that it doesn't have per se. Notwithstanding these facts, into whose details we will not go further now, the syntax and the basic predicative semantics of a sentence remain the same whether or not it comes with a conditional clause.

As to consecutive and comparative clauses, except for the special kind of consecutive construction exemplified above in (22), they play the same role as complement and relative sentences with respect to determining the truth value of the clause they are embedded in. We consider that this truth-functional intertwining of structures establishes a well-defined class of subordinate clauses on semantic grounds.

2.4.3 *An intermediate step: fixing terminology*

Before proceeding with additional considerations on the class of subordination isolated in the previous section, a few terminological specifications are well-timed. They are given schematically, with illustrating data and no comments[19]:

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[18] The 2004 TLEBS spreads the erroneous traditional view also on this matter.

[19] This choice of terminology, inspired in different solutions provided by the abovementioned English grammars, is as arbitrary as any other, although we think we can supplement it with reasonable motivation (elsewhere, in any case).

(26) [o Pedro disse   [que a Ana é simpática]]

SUBORDINATE (COMPLEMENT) CLAUSE

MATRIX CLAUSE (= SUBORDINATING CLAUSE)

(27) [[o livro [que me deste]]   é interessante]

SUBORDINATE (RELATIVE) CLAUSE

MATRIX CLAUSE (= SUBORDINATING CLAUSE)

(28) [a Maria continuará a estudar   se obtiver uma bolsa][20]

SUBORDINATING CLAUSE

SUBORDINATE (ADV.) CLAUSE

MATRIX CLAUSE

2.4.4 A syntactic criterion: clause anaphora

The terminology having been clarified in the previous section, we wish to make the following point, which we believe encompasses a steady syntactic corroboration of the class hitherto defined in just semantic terms:

A matrix clause can never be anaphorically recovered within a subordinate clause; conversely, a subordinating clause that is not a matrix clause can be anaphorically recovered within a subordinate[21].

The anaphora of a subordinating clause within a subordinate is named **subordinating clause anaphora** (henceforth, SCA). We will not try to build up funny ungrammatical strings of words in order to blatantly and comprehensively show that a complement clause, a relative clause, a consecutive or a comparative, cannot contain a pro-sentence of its matrix, that is, that they reject the SCA. Instead, we will just supply some instances of anaphoric recovery of a subordinating clause within an adverbial subordinate:

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[20] We intentionally leave undefined the attachment level of the adverbial clause, an issue we don't want to deal with in the present work.

[21] It is very unlikely that this statement has not yet been expressed in the literature. In case it has, we apologize for not having the references and giving due credit.

(29) A Ana irá a Londres,   quando ISSO for possível.
      the Ana will-go to London when that is possible
      'Ana will go to London   when that is possible.'
                                  porque ISSO lhe dá prazer.
                                  because that to-her gives pleasure
                                  because that gives her pleasure.'
                                  para com ISSO alargar a sua cultura.
                                  for with that broaden the her culture
                                  so as to broaden her culture.'
                                  se ISSO for necessário.
                                  if that is necessary
                                  if that is necessary.'
                                  apesar de ISSO lhe sair caro.
                                  in-spite of that to-her come-out costly
                                  although that will cost her greatly.'

Additionally, in order to prevent some future counter-argumentation, we provide, without further comment, a sequence with a consecutive clause which we believe most speakers will accept on a first reaction, but that, upon minute analysis and comparison with a non-anaphoric version, we take as ungrammatical (if for no other reason, for lack of meaning), beyond any reasonable doubt:

(30) a. *Estava tanta gente na sala que ISSO me incomodou.
          was so-many people in-the room that that me bothered
          'There were so many people in the room that that made me uneasy.'
      b. Estava tanta gente na sala que me senti incomodado.
          was so-many people in-the room that me felt bothered
          'There were so many people in the room that I felt uneasy.'

The sort of so-called pronominalization under discussion now is also available with coordination (at least copulative and adversative) and with some non-propositional connections, namely attached adversatives, and explicatives[22], a predictable fact given the autonomy of the sentences being connected. Some examples:

(31) a. A Ana vai a Londres, e ISSO será bom para ela.
          the Ana goes to London and that will-be good for her
          'Ana is going to London, and that will be good for her.'

---

[22] It is quite obvious why the other non-propositional connections don't allow anaphoric recovery. Due to space restrictions, we will skip the details. As for the resistance of disjunction to the construction, it deserves more thought.

b. A Ana vai a Londres, mas ɪsso não a impede de vir
the Ana goes to London but that not her impede of come
à festa.
to-the party
'Ana is going to London, but that doesn't stop her from coming to the party.'

c. A Ana vai a Londres; porém, ɪsso não a impede de vir
the Ana goes to London however that not her impede of come
à festa.
to-the party
'Ana is going to London; however, that doesn't stop her from coming to the party.'

d. A Ana vai a Londres, uma vez que ɪsso está no contrato.
the Ana goes to London one time that that is in-the contract
'Ana is going to London, since that is in the contract.'

2.4.5 *Free versus Bound Subordination*

The properties that were discussed in sections 2.4.2 and 2.4.4 circumscribe two very distinct classes of subordination, which, under a semantic perspective, have to do with truth-functionality, and, on the syntactic side, with constituency, expressed in the acceptance or rejection of the SCA. We call **free subordination** (Port. "subordinação livre") the mode of subordination that allows the SCA, and, on the same grounds, independent truth values of the subordinating and subordinate clauses, and **bound subordination** (Port. "subordinação presa") the mode where the SCA is rejected, and the truth value of the subordinating (and matrix) clause cannot be computed independently of the meaning contributed by the subordinate clause.

In Table 4, the subordination types that appear in the NGP (regardless of the finite or non-finite form of the subordinate sentence) are classified as free or bound subordination. Notice that all six subtypes of consecutive clauses presented in (16)-(21), section 2.4.1.1 above, are taken as instances of a single class of subordination – specifically, bound subordination – regardless of the level of their syntactic insertion. This is justified by the fact that we are not subclassifying subordinate clauses in terms of the depth of their embedding – say, in an inner or outer position with regard to the main verb – but instead in terms of the interdependence of subordinating and subordinate clauses. In the case of consecutives, the consecutive trigger is the inescapable binding element, which, by binding the subordinate clause, supplies the subordinating with an indispensable part of its meaning.

SUBORDINATION (*SUBORDINAÇÃO*)	FREE (*LIVRE*)	*causal, final, temporal, concessiva, condicional,*
	BOUND (*PRESA*)	*substantiva, adjectiva, comparativa, consecutiva*

Table 4 – Major subordination classes defined in terms of truth computation and the subordinating clause anaphora

2.5   Subordination subclasses

It is well known that the classes of clauses classified here as "bound" and "free subordination" are not homogeneous groups. We will now elaborate on this idea, starting with the bound variety. We know from section 2.3 that movability was effective in separating coordination from so-called "adverbial subordination", and, within this traditional class, comparatives and consecutives from the other "adverbial" classes (cf. Table 3 above). If we now add sentential complements and nominal modification clauses, we see that movement clearly splits this group of four into two: one with only verb complementation (Port. "subordinação substantiva"), which moderately accepts movement, another with nominal modification, comparative and consecutive clauses, which (with minor exceptions in relative clauses) patently reject it.

Regarding complementation, the syntactic category of the expression taking the complement is decisive in allowing movement, which is easier in verbal than in nominal or adjectival complementation. Leaving a deeper scrutiny of such constraints aside, we restrict ourselves to providing a couple of examples that illustrate some of the movement possibilities with complementation[23] in (32) below, and in (33) with (arguably restrictive) relative clauses:

(32) a. [que estes trabalhos são morosos]$_i$ toda a gente sabe [ ]$_i$
that these works are morose all the people knows
'that these chores are morose everyone knows'
b. [em melhorar o ambiente]$_i$ estamos todos interessados [ ]$_i$
in better [verb] *the environment are all interested*
'in bettering the environment(,) are we all interested'
c. vários indícios [ ]$_i$ foram detectados [de que está a haver
several pointers were detected of that is to being
actividade sísmica]$_i$
activity seismic
'several pointers were detected as to seismic activity being in course'

---

23   Some of these facts are known in the literature (cf., a.o., Mateus *et al*. 2003).

(33) a. Há *pessoas que não sabem o que fazer ao dinheiro.*
    exist people that not know the what do to-the money
    'There are people who don't know what to do with money.'

  a'. *Pessoas* há *que não sabem o que fazer ao dinheiro.*
    people exist that not know the what do to-the money
    '(Some) people exist who don't know what to do with money.'

  b. Acabam de ser descobertos *novos elementos que incriminam*
    finish of be discovered new elements that incriminate
    os detidos.
    the arrested
    'New traces that incriminate the people arrested have just been discovered.'

  b'. *novos elementos* [ ]ᵢ acabam de ser descobertos [*que incriminam*
    new elements finish of be discovered that incriminate
    os detidos]ᵢ
    the arrested
    'New elements have just been discovered that incriminate the people arrested.'

Movement is not, however, the crucial test for straightforwardly telling apart the diverse forms of bound subordination. This role, we think, is played by cleft constructions, which, to our knowledge and judgments, only (verbal) complementation allows. Again, we will skip weird demonstrative ill-formed constructions with other classes, instead resorting to just a few examples of cleaving in verbal complementation[24]:

(34) a. Eles queriam era que nós desistíssemos.
    they wanted was that we quit
    'What they wanted was for us to quit.'

  b. Eu penso é que nós devíamos consultar um especialista.
    I think is that we should consult a specialist
    'What I think is that we should see a specialist.'

  c. Eles estão interessados é em que nós apresentemos propostas.
    they are interested is in that we present proposals
    'What they are interested in is that we come up with proposals.'

In spite of the differences observed within bound subordination, we choose not to introduce additional subclassification. Two facts justify this choice: first, the variety of complementation structures; second, the variety of consecutive structures, in this case associated with possibly different levels of syntactic attachment. Accordingly, we simply give, in Table 5, the results of

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[24] Given the peculiar characteristics of Portuguese cleft constructions, namely the fact that they come in such varied kinds, the English translations of examples (34) necessarily stray from the letter of the Portuguese versions.

the four subclasses of bound subordination we have been analyzing in the movement and cleaving tests.

		MOVEMENT	CLEFT
bound subordination (*subordinação presa*)	*substantiva*	$\pm$	$+$
	adjectiva	$-$	$-$
	comparativa	$-$	$-$
	consecutiva	$-$	$-$

Table 5 – Some properties of bound subordination

Moving now to free subordination, we recall that in Peres (1997) negation and the cleft construction were the factors that subclassified adverbial (our "free") subordination. Table 6 below contains the relevant connection classes and what were then considered to be distinguishing features.

		NEGATION	CLEFT
adverbial subordination (*subordinação adverbial*)	*concessiva*	$-$	$-$
	condicional$_1$	$-$	$+$
	condicional$_2$	$-$	$+$
	causal	$+$	$+$
	final	$+$	$+$
	temporal	$+$	$+$

Table 6 – The picture of adverbial subordination in Peres (1997)

According to Peres' account, negation allowed the distinction of two groups: one including concessives and conditionals, the other covering causal, final, and temporal clauses. As to the cleaving process, it isolated concessives with respect to the remainder of adverbial subordination. We think it's time for a revision.

Concerning negation, a useful piece of evidence is provided in Lobo (2002), where the claim is made that, in a pair like the following (cf. p. 86; our glosses and translations):

(35) a. Eu não comprava esta casa *se ganhasse a lotaria*.
　　　　I not would-buy this house if won the lottery
　　　　'I wouldn't buy this house if I won the lottery.'
　　b. Eu não comprava esta casa *desde que ganhasse a lotaria*.
　　　　I not would-buy this house from that won the lottery
　　　　'I wouldn't buy this house as long as / provided that I won the lottery.'

the first sentence allows wide scope of negation, while the second doesn't[25]. If this is the author's claim, then she is right and falsifies Peres' (1997) contention that a compound sentence formed by a subordinating clause and a subordinate conditional could not be placed under the scope of common sentential negation.

   Although what we just said is the point that matters, for which, in case we are interpreting the author in the right way, we give her due credit, we shouldn't avoid a comment on the fact that the pair of sentences in (35) follows, with several others, Lobo's observation that "there isn't a strict correlation between semantic types and syntactic types of adverbial clauses, contrary to what is suggested in Peres 1997" (*ib.*). Of course, it may well be the case that this is true, but the proof isn't in the least provided by Lobo's argumentation and data. As a matter of fact, in every case, the members of the pairs used for the same purposes as (35) – cf. *ib.*: pp. 86-88 – don't belong in the same semantic type of inter-sentential connections, given of course a fine--grained and well-founded semantic typology, not what Lobo describes as "(traditional) semantic class[es])", which ultimately are pre-theoretical grammar school notions, sometimes useful and very often inaccurate. In the case of (35), the first sentence is a standard conditional (that is, a conditional where the operator introduces a sufficient condition), while the second one is a biconditional. Concluding this paragraph's digression, we firmly restate that all the evidence we gathered on the topics of this work points in the direction of a close correlation between semantic and syntactic properties. Evidently, provided that semantics is taken seriously.

   Returning to what we take to be Lobo's point, let us first make explicit the wide scope negation interpretation of (35a), which is paraphrasable as

   (36) não é verdade que [eu comprava esta casa se ganhasse a lotaria]
         not is true that I would-buy this hose if won the lottery
         'it is not the case that I would buy this house if I won the lottery.'

According to our intuition, no semantic difference appears to exist between (35a) and (36), but we must certify this prima facie evidence. As usual, we resort to propositional calculus as an elementary tool for analyzing conditionals, even if we know (as will promptly become conspicuous) that material implication and natural language conditionals are not equivalent. Taking the letters G and C to represent, respectively, the antecedent (or sufficient condition, or protasis) of (35a) – *se ganhasse a lotaria* – and the consequent (or necessary condition, or apodosis) – *eu não comprava esta casa*

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[25] This is what we presume the author means, because she places the two sentences (with an asterisk in the second) under the heading "scope of negation (focus negation)", which is rather unclear, insofar as scope and focus of negation cannot be taken to mean the same thing.

– let us look at the truth table of standard material implication as applied to these propositions:

I	II	III	IV	V	VI
G	C	$\neg C$	$G \to \neg C$ (narrow scope)	$G \to C$	$\neg(G \to C)$ (wide scope)
1	1	0	0	1	0
1	0	1	1	0	1
0	1	0	1	1	0
0	0	1	1	1	0

Truth table 1 (Marked antecedent conditionals)

Column IV in Truth table 1 corresponds to the (negation) narrow scope reading of (35a) – *se ganhasse a lotaria, eu não comprava esta casa* – and column VI to wide scope – *não é verdade que eu comprava esta casa se ganhasse a lotaria*. The old naïve look at this truth table would tell that two genuinely different readings are at stake, since the two propositions in columns IV and VI don't have the same truth conditions. This is not, however, the consensual way to look at natural language conditionals, since as far back as the seminal work of Ramsey (1929), later developed particularly in Stalnaker (1968) and Lewis (1973). In simple terms, Ramsey's approach to natural language conditionals proposes the following computational path: add the antecedent to your belief system, even if this step requires changing the truth value of one or more propositions therein; verify then if the consequent follows from the new stock of beliefs; if it does, the conditional is true, otherwise it is false. Leaving aside the problems of consistency raised by counterfactuals, which are of no concern here, if we assume the basics of Ramsey's ingenious computational trend, the only truth value lines that actually matter in Truth table 1 (and in those to come below, for that matter) are the first and the second, the only two where the truth of the antecedent is in effect. Now, in both these cases, the narrow scope and the wide scope versions have the exact same truth value, regardless of the value of the consequent. Things being so, and without going into further details, the conclusion to be drawn is that in contemporary natural language semantics – not in propositional calculus and its material implication – there is no difference between the narrow and the wide scope readings of (35a), for which reason the statement that this sentence allows a wide scope negation reading is ultimately immaterial. Notice, however, that the same is not exactly the case with the biconditional in (35b). Prior to trying to settle these matters as clearly as possible, it is suitable to briefly address the issue of conditional subtypes.

As already mentioned above, Peres *et al.* (1999) distinguish four subtypes of "conditional constructions" (understood here as the combination of the subordinating clause and the subordinate conditional), namely: (i) "condi-

tionals with marked sufficient condition" (from the fact that the operator is applied to the antecedent of the implication), that is, standard *if-then* conditionals; (ii) "conditionals with marked necessary condition" (from the fact that the operator is applied to the consequent of the implication), with, e.g., *só se / apenas se / somente se* (Eng. *only if*); (iii) "biconditionals", subdivided into "direct biconditionals" – with, e.g., *se e só se, desde que, contanto que* (Eng. *if and only if, provided that*) –, and "indirect biconditionals" – with *excepto se, salvo se, a menos que, a não ser que* (Eng. *unless*); finally, (iv) the commonly designated "concessive conditionals", termed *incondicionais* in a Peres and Móia's 1991 manuscript, and, independently, *unconditionals*, in Zaeffererer (1991). The marked antecedent type is already exemplified in (35a), and so is the (direct) biconditional in (35b), with Lobo's examples. Let us, then, just provide the missing examples of a marked consequent conditional in (37a-b), where the two sentences are semantically free variants of each other, and of an unconditional (or, more traditionally, concessive conditional) in (38):

(37) a. Eu não comprava esta casa *só se perdesse o emprego*.
      I not would-buy this house only if lost the job
      'I wouldn't buy this house only if I lost my job.'
   b. Eu *só* não comprava esta casa *se perdesse o emprego*.
      I only not would-buy this house if lost the job
      'I would only not buy this house if I lost my job.'
(38)   Eu não comprava esta casa *mesmo que ganhasse a lotaria*.
      I not would-buy this house even that won the lottery
      'I wouldn't buy this house even if I won the lottery.'

Let us now bring together the examples of marked consequent, biconditional and unconditional with the corresponding wide scope paraphrases (with the same predicative external negation construction that we used for the marked antecedent case)[26]. Each pair is followed by the relevant truth table for the two readings (again, with italicized capital letters standing for sentences as signalled). We start with the marked consequent case:

(39) a. Eu não comprava esta casa (*C*) *só se perdesse o emprego* (*P*).
      'I wouldn't buy this house (*C*) only if I lost my job (*P*).'
   b. não é verdade que [eu comprava esta casa *só se perdesse o emprego*]
      'It is not the case that I would buy this house only if I lost my job.'

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[26] Notice that we changed the lexical material in the biconditional, for the simple and imposing reason – though apparently negligible in much linguistic literature – that not every lexical item suits every construction or meaning combination.

C	P	¬C	¬C → P (narrow scope)	C → P	¬(C → P) (wide scope)
1	1	0	1	1	0
1	0	0	1	0	1
0	1	1	1	1	0
0	0	1	0	1	0

Truth table 2 (Marked consequent conditionals)

If one pays close attention to the real meaning of the two sentences in (39), it becomes quite obvious that they don't convey the same information. As it happens, (39a) states that the only circumstance under which the utterer <u>would not buy the given house</u> would be the loss of his job. Quite differently, (39b) states that it is not true that the only circumstance under which he <u>would buy such house</u> would be the loss of his job (which means that the prospective buyer admitted buying the house even if he didn't lose his job). Anyway – and more conspicuously, because more formally – what emerges from Truth table 2 is that the narrow and the wide scope readings are different in the conditions that matter, which again correspond to the two first lines in the table, following Ramsey's approach.

In (40) and (41), respectively, the biconditional and unconditional cases and their truth tables are presented. As can be observed, in both cases the narrow and wide scope interpretations are nothing but equivalent.

(40) a. Eu não vendo esta casa (*V*), *desde que me saia a lotaria* (*S*).
       I not sell this house from that me come-out the lottery
       'I wouldn't sell this house (*V*) provided that I win the lottery (*S*).'
   b. não é verdade que [eu vendo esta casa, *desde que me saia a lotaria*]
       'It is not the case that I would sell this house provided that I win the lottery.'

V	S	¬V	¬V ↔ S (narrow scope)	V ↔ S	¬(V ↔ S) (wide scope)
1	1	0	0	1	0
1	0	0	1	0	1
0	1	1	1	0	1
0	0	1	0	1	0

Truth table 3 (Biconditionals)

(41) a. Eu não comprava esta casa (*C*) mesmo *que ganhasse a lotaria* (*G*).
       'I wouldn't buy this house (*C*) even if I won the lottery (*G*).'

b. não é verdade que [eu comprava esta casa *mesmo que ganhasse a lotaria*]

'It is not the case that I would buy this house even if I won the lottery.'

C	$\neg C$	$G \vee \neg G$	$(G \vee \neg G) \to \neg C$ (narrow scope)	$(G \vee \neg G) \to C$	$\neg((G \vee \neg G) \to C)$ (wide scope)
1	0	1	0	1	0
0	1	1	1	0	1

Truth table 4 (Unconditionals)

Returning to where we started, we hope it is now clear what can be said about negation scope and conditionals, namely that the difference in scope is relevant only for marked consequent conditionals. In the other three cases, it is totally irrelevant, because the two interpretations are equivalent, either given any truth value assignment to the atomic sentences, in the case of biconditionals and unconditionals, or with the assignments that matter to a down-to-earth natural language semantics.

All things considered, it appears that, contrary to Peres' (1997) impression, the wide scope negation test, even if it is only a sufficient condition – not a necessary one – for subordination in general, doesn't play a crucial role in the subclassification of free subordination. Such role appears to be played by the cleft construction, which is blocked by two subtypes of free subordination: concessives and unconditionals (or, again, concessive conditionals). This exclusion possibly indicates a higher degree of autonomy of all concessives with respect to the subordinating clause (contrary to what happens with bound subordination, where the impossibility of cleaving may be a sign of strong dependency). Interestingly enough, concessives and unconditionals are the only clauses within subordination whose semantics involves the computation of an implicit proposition (in the same manner as coordinated and attached adversatives). In Table 7 below, we group all the subclasses of free subordination we have considered so far, including those that were not in the NGP and give their values with wide scope negation (where the plus sign enclosed in parentheses signifies the irrelevance of the wide scope possibility due to the aforementioned equivalences). Taking into account the cleft construction test, we split them into two subclasses: **inner free subordination** and **outer free subordination**. The labels suggest a variation in the degree of connectedness of the circumstantial complements (in terms just as traditional as suggestive) that can be added to a subordinate clause. We cannot explore this issue now.

			NEGATION	CLEFT
free subordination (*subordinação livre*)	outer (*externa*)	*concessiva*	–	–
		incondicional (ou condic. conc.)	(+)	–
	inner (*interna*)	*bicondicional*	(+)	+
		condicional de anteced. marcado	(+)	+
		condicional de conseq. marcado	–	+
		causal	+	+
		final	+	+
		temporal	+	+

Table 7– Subcasses of free subordination

2.6   *Overall view and some (possibly) less-known data*

To end this section, we draw together in Table 8 the overall results of our investigation throughout this article. Although, as stated from the beginning, we have only worked on inter-sentential connections involving an explicit operator, the immense class of **juxtaposition** is added, in the first line of the table. This is a class of sentential relations involving connections that don't exhibit an operator and don't introduce additional sentential syntactic structure (that is, that already lie beyond grammar, in the opinion of some authors, which we don't necessarily share). Our purpose is to offer as extended and integrated a view of inter-sentential connections as we are prepared to build at the moment. To our regret, other forms of apposition besides supplementation will have, this time, to remain in the dark.

In Figure 1, we give a rough graphic representation of the major groups of connections we have dealt with in this article, assembled in Table 8. The different sections in the diagram have the general semiology made explicit in the caption. Besides, it is convenient to decode some other symbols: in **C** and **E**, the open corners in the left side rectangles and the continuous arrows passing trough them symbolize the possibility of supplements to move (with restrictions) inside the supplemented clause and of free subordinates to move (practically with no limits) inside the subordinating clause; in **E**, the X-bar version of S_1 (overlined S_1) conveys the crucial idea that, in free subordination, the matrix clause is an expansion (a projection, in some terminology) of the subordinating clause S_1; in **F**, the double box gives the idea of bound embedding, and the ellipsis dots signify the varying level of embedding.

Our last digression within this central section consists of calling attention to two kinds of constructions that, to our knowledge, have not so far been recognized, at least as distinctive entities, thus showing that the image of inter-sentential connections depicted in Table 8, extensive as it may be, is still incomplete, possibly even far from being complete.

				COMPL	S-ADV	CSC [27]	SCA	MOV.	CLEFT	NEG.
NON-PROP. CONNECTIONS (*CON. NÃO.-P.*)		JUXTAPOSITION (*JUSTAPOSIÇÃO*)			−	−			−		−
		ATTACHMENT (*ANEXAÇÃO*)		*conclusiva*	−	−			−		−
				adversativa anexa	−	−			−		−
		SUPPLEMENTATION (*SUPLEMENTAÇÃO*)		*relativa suplementar (ou não-restritiva)*	−	−			±		−
				conformativa	−	−			+		−
				explicativa	−	−			±		−
PROPOSITIONAL CONNECTIONS (*CONEXÕES PROPOSICIONAIS*)		COORDINATION (*COORDENAÇÃO*)		*copulativa*	+	+	+		−	−	−
				disjuntiva	+	+	+		−	−	−
				adversativa coordenada	+	+	+		−	−	−
	SUBORDINATION (*SUBORDINAÇÃO*)	FREE (*LIVRE*)	OUTER (*EXTERNA*)	*concessiva*	+	+	−	+	+	−	−
				incondicional	+	+	−	+	+	−	(+)
			INNER (*INTERNA*)	*bicondicional*	+	+	−	+	+	±	(+)
				condicional de antecedente marcado	+	+	−	+	+	±	(+)
				condicional de consequente marcado	+	+	−	+	+	+	−
				causal	+	+	−	+	+	+	+
				final	+	+	−	+	+	+	+
				temporal	+	+	−	+	+	+	+
		BOUND (*PRESA*)		*substantiva*	+	+		−	±	+	+
				adjectiva	+	+		−	−	−	+
				comparativa	+	+		−	−	−	+
				consecutiva	+	+		−	−	−	+

Table 8– A tentative (and visibly incomplete) overview of inter-sentential connections

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[27] The blank cell spaces mean either that the property in the column doesn't apply to the affected group of connections, or that, since it would in any case give secondary importance results for our purposes, we didn't, for reasons of time and space, check its applicability.

Starting from the top of the table, we first mention supplementary (or non--restrictive) relative clauses. Although, as we said before, we are only taking into account the sentential variety, leaving the nominal ones unanalyzed, we think this is a good opportunity to suggest (or repeat, if others said it before) that other types of non-restrictive relative clauses exist, namely those predicating on adjectival or adverbial phrases, as shown below:

(42) a. Dizem que ele é *ambicioso*, *o que* ele não é.
   say that he is ambitious, the that he not is
   'They say he is ambitious, which he isn't.'

b. Ela julga que canta *muito bem*, *o que* não canta.
   she thinks that sings very well, the that not sings
   'She thinks she sings very well, which she doesn't.'

c. O ministro acha que agiu *de acordo com a lei*, *o que* não agiu.
   the minister thinks that acted of accord with the law, the that not acted
   'The minister thinks he acted in accordance with the law, which he didn't.'

d. O carro ia a mais de cento e cinquenta quilómetros,
   the car went at more of one-hundred and fifty kilometres,
   o que é muito.
   the that is a-lot
   'The car was moving above one-hundred-and-fifty kilometres an hour, which is a lot.'

In Quirk *et al.* (1985), some data are presented which raise a similar issue, even though with other categories involved. In fact, this grammar states that "unlike adnominal relative clauses, which have a noun phrase as antecedent, the sentential relative clause refers back to the predicate or predication of a clause (…), or to a whole clause or sentence (…)" (cf. p. 1118). The examples for the connection with "the predicate or predication of a clause" are as follows:

(43) a. They say he *plays truant*, *which* he doesn't.
   b. He walks for an hour each morning, *which* would bore me.

Clearly, in (43a), the relative clause is predicating on *play truant*, a complex predicate. This being the case, the authors' classification of such clause as "sentential" is, we think, quite unsuitable, and it becomes much more so as one grows aware that relative pronoun dependencies like those in (42) are also available. The example in (43b), where the relative may well be
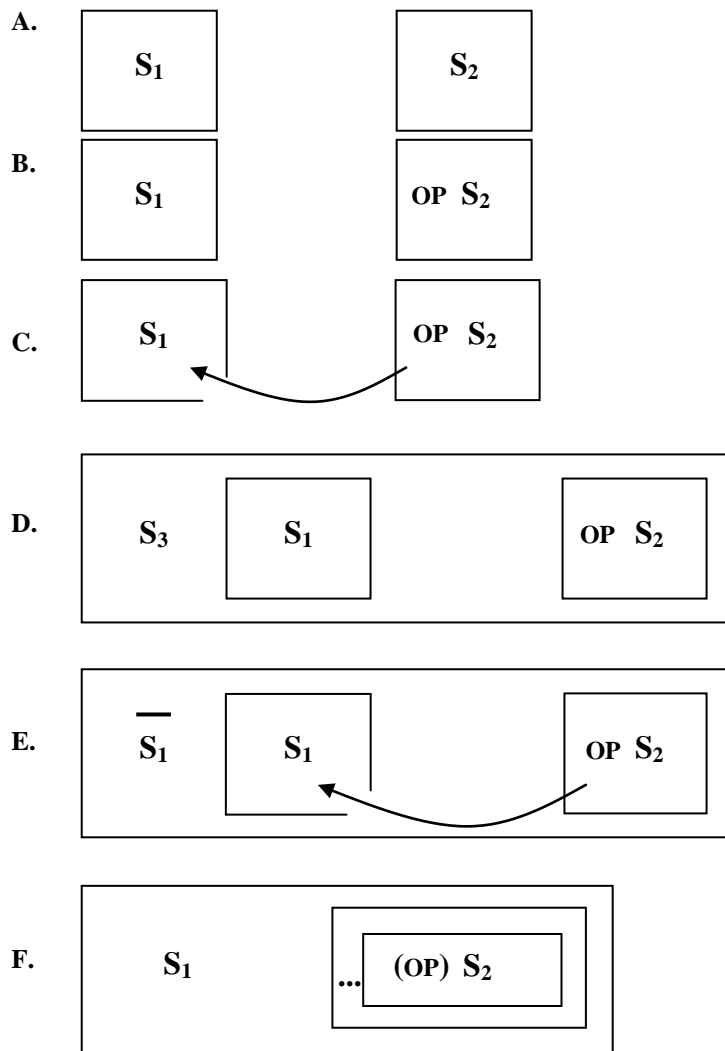
A. S_1 S_2

B. S_1 OP S_2

C. S_1 OP S_2

D. S_3 S_1 OP S_2

E. $\overline{S_1}$ S_1 OP S_2

F. S_1 ... (OP) S_2

Figure 1 – Diagrammatic representations of inter-sentential connections

A – Juxtaposition.
B – Attachment.
C – Supplementation.
D – Coordination.
E – Free subordination.
F – Bound subordination.

sentential in nature, appears to be one of the well-known intricate and semantically challenging cases where a (say) sentential anaphor (in this case, a relative one) does not recover the antecedent as it is, but only its predicative skeleton, so to (metaphorically) speak.

The second kind of construction fits within subordination, with the novel difficulty that now we don't have any connection class to associate our data with in a straightforward manner. Let the data speak:

(44) a. [a destituição de um Governo (*só*) *porque não conseguiu*
   the overthrow of a government (just) because not managed-to
   reduzir o défice] é inaceitável
   reduce the deficit] is unacceptable
   'The overthrow of a Government (just) because it didn't succeed in reducing the deficit is unacceptable.'

 b. [o envio de mais tropas *caso se verifique uma situação*
   the deployment of more troops case it verifies a situation
   de crise] foi previsto na resolução da ONU
   of crisis] was contemplated in-the resolution of-the UN
   'The deployment of more troops in case a crisis situation emerges, was contemplated in the UN resolution.'

 c. [a presença de soldados estrangeiros no território,
   the presence of soldiers foreign in-the territory,
   apesar de haver uma decisão em contrário do Conselho
   in-spite of exist a decision in contrary of-the Council
   de Segurança], constitui uma grave violação do
   of Security constitutes a serious violation of-the
   direito internacional
   law international
   'The presence of foreign troops in the territory, in spite of there being a resolution to the contrary by the Security Council, is a serious violation of international law.'

What the sentences in (44) show is that clauses expressing the same kind of semantic information as adverbial clauses (e.g., reason, condition, and concession in (44a-c), respectively) can be applied to nouns – not only situational nouns, we stress – instead of verbal structures[28]. This kind of structure, which was acknowledged in Lasersohn (1996) (albeit exclusively with respect to the conditional value)[29], represents a sort of connection that, as

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[28] Of course, we need not demonstrate that the italicized circumstantial clauses in (44a-c) are not applying to the remainder of the text as a whole, which we think is incontrovertible for any standard speaker.

[29] Again, if other references could be given in this respect, we apologize for not ascribing them due credit.

far as we know, no grammatical tradition has yet incorporated. With no further comments, and just in order to provisionally fill a terminological gap, we call these clauses **adnominal free subordinates**. And so the story ends (for the time being).

3 Zooming in on explicative connections

The general account of inter-sentential connections we presented in the previous section is nothing but a comprehensive sketch that, in order to be of some use, requires in-depth studies of all and each of the kinds of connections therein considered. Lacking time and space to demonstrate that this is true in many (maybe even most) cases, we chose the domain of explicative connections (whatever each reader may take this to mean, from some notion of ontological cause to one of discourse explanation…) to illustrate the disappointing state where our linguistic studies have up to now lead us: particularly in this case, a state of utmost confusion. The following two examples and associated analyses bear witness to our diagnosis:

(45) Choveu, *porque* as ruas estão molhadas.
  rained, because the streets are wet
  'It rained, since the streets are wet.'

(46) Chegámos atrasados, *pois* está um trânsito infernal.
  arrived late, since is a traffic hellish
  'We were late, due to the hellish traffic.'

These two sentences are supplied by different authors, but in exactly the same grammar[30]. The first appears in a section on "causal clauses", preceded by the following comment: "Be noticed that the so-called causal clause may, in certain utterances, express what is logically a result and not the cause (…)" (cf. p. 712). Of course, this description of the meaning of the text is not materially untrue, and anyone can capture what it means. The point is that a grammar has to offer and systematically make use of clear and distinctive concepts, which is noticeably not the case in the description at issue. Much to the contrary, the quoted comment lets us know that there are causal clauses that are not causal at all, expressing a result instead of a cause, which of course doesn't make any sense at all. Indeed, the author should simply have said that (45) contains an explicative clause, regardless of relating or not this concept with that of causality. We hope that our criticism will become clearer in the next subsection.

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[30] Cf. Mateus *et al.* (2003): pp. 712 and 97, respectively. The translations are our responsibility.

As to sentence (46), it is presented by another author as an example of the group of "inferential connections", which "express a logical argument" (cf. p. 97). More specifically, the text is described as an example of "coordinate connections where the first coordinate member presents the conclusion of the [kind of abovementioned] argument, pertaining to the second one the expression of a premise or justification" (cf. *ib*.). Again, we hope that the next section will make it clear that (46) does not even remotely involve an inferential connection of any kind, being instead an instance of a plain causal relation (in the basic sentence that used to be taught in grammar school).

Prior to depicting in some more detail the scenery of explicatives in Portuguese linguistics, we will expose a semantic and pragmatic view of the constructions at stake, found in Sweetser (1990), to which we basically adhere. This will provide a reference point relative to which we will be able to identify the intricacies we are faced with, and, hopefully, will help us to fulfil the goal of bringing some clarification into the topic under discussion.

3.1   A reference point: Sweetser's (1990) tripartite analysis of "causality"

During the last quarter of the past century, the dichotomy semantics (the meaning of the text) / pragmatics (the meaning of the text in a situation) was recurrently used in order to account for diverse aspects of meaning, including those related to connections between sentences (van Dijk 1977 being a classic reference). Sweetser (1990) advocates instead a tripartite view of meaning, which, she claims, unfolds over three "domains": a "content" (or "real--world") domain, an "epistemic" (or "reasoning") domain, and a "conversational" (or "speech act") domain (cf. chapters 3-5). The author applies this distinction to modals and to various sentential connections, including conditionals and a pool she groups under the label "causality": "content conjunction" (corresponding to causal subordination in the Portuguese grammatical tradition), "epistemic conjunction", and "speech-act conjunction" (the latter two corresponding, in general, to explicative coordination in the Portuguese grammars).

We find Sweetser's distinctions quite operative in view of reaching a sound characterization of the explicative connection. Nevertheless, we depart from her views in several matters. The first is the use of the terms "cause", "causality", and others from the same lexical group. In this respect, we wish to make it clear that our use of these terms throughout this paper signifies neither an adherence to the loose employment adopted by Sweetser, nor any commitment to a presumed well-defined notion of "cause" or "causality". Known as it is that these notions are quite cumbersome, from the points of view of both Logic and science in general (Physics, in particular), we would rather resort to a more neutral notion to cover the same spectrum of linguistic meaning that "cause" and "causality" cover in Sweetser' work. A reasonable choice would be "explanation", which was preferred in Segmented Discourse Representation Theory from the very beginning (cf. Asher and Lascarides 2003 and previous

work from the early nineties). It is only for the sake of avoiding unnecessary confusion that we will informally use the terms of the "cause" family.

Sweetser (1990) distinguishes three readings that structures containing (her) causal conjunctions can take, exemplified as follows:

(47) John came back because he loved her.
(48) John loved her, because he came back.
(49) What are you doing tonight, because there's a good movie on.

In the author's terms, example (47) illustrates a relation of 'real-world causality' between the two connected propositions, which does not apply in (48) and (49). According to her, there may well be a real-world causal relation in (48) that is the same as in (47), but what the *because*-clause expresses in (48) is not **content** (or **real-world**) **causality**, as in (47), but rather **epistemic causality**, whereby the "cause" (of course, here, more than ever, we would rather use "explanation") for a given conclusion is supplied. In (48), the speaker's knowledge of the fact that John returned is given as the cause for drawing the conclusion that he loved her. As for (49), it radically differs from (48) in that the first clause is not a conclusion being derived from the second one. In fact, the first clause (a *wh*-clause) does not even pragmatically qualify as an assertion, but as a different kind of a speech act, namely a question. What the clause introduced by *because* does is give a "cause" for such particular speech act (hence the designation **speech-act** causality).

By and large, we subscribe to Sweetser's fine-grained analysis just sketched. However, in another point of divergence, we don't agree with the meaning descriptions she gives for (48) and (49). Regarding (48), she states that it "is normally understood as meaning that the speaker's *knowledge* of John's return (as a premise) causes the *conclusion* that John loved her" (cf. p. 77). This statement is utterly inaccurate and does not by any means describe the meaning of (48). In fact, this text, in its literal meaning (we are not talking about inferred meaning, of course) does not inform about a relation of causality between a piece of knowledge in someone's mind and some conclusion. Instead, it is composed of an assertive speech act (*John loved her*) and, as we will see in the next section, part of the explanation the speaker presents for the execution of this assertive act.

As regards (49), Sweetser's attempt to make its meaning explicit is also inadequate: «the reading [of (49)] is something like "I *ask* what you are doing tonight because I want to suggest that we go see this good movie"» (cf. p. 77). This alleged paraphrase, where the interrogative is embedded under the verb *ask*, hence involving a subordinating assertion and a subordinated *because*--clause, ultimately conveys information that crucially differs from that of (49). Indeed, the interpretation the author proposes misleadingly suggests that (49) is equivalent to a content causality à la Sweetser. Compare (49) with her proposed reading, reproduced as (50):

(49) What are you doing tonight, because there's a good movie on.
(50) I ask what you are doing tonight because I want to suggest that we go see this good movie.

In (50), the *because*-clause establishes a content (or real-world) causal relation between the declarative clause *I ask what you are doing tonight*, and the causal clause *I want to suggest that we go see this good movie*[31]. From a truth--theoretical point of view, this text is either true or false. Quite differently, (49) performs two speech-acts: a directive one (the question *what are you doing tonight*) and an assertive one (*there's a good movie on*). The latter supplies an explanation (or justification, or motivation, or any of the like) for the first. In a truth-sensitive semantics, (49) is neither true nor false as a whole, because it is not a truth-functional combination of assertions (as a matter of fact, only the clause introduced by *because* has a truth value, given that questions cannot be assigned one)[32].

3.2   A synthesis of the semantics and pragmatics of explicative clauses

3.2.1   An alternative systematization

While understanding Sweetser's motivation for the tripartite analysis described in the previous section, we agree with those advocating a not less satisfactory binary classification. In fact, the epistemic mode can be seen as a form of explanation relation (or "causal conjunction", in Sweetser's terms) between a proposition and a speech act, namely an assertive one. If this perspective is adopted, the epistemic and speech act modes can come under a single pragmatic umbrella, contrasting only with a purely semantic (Sweetser's "content" or "real-world") kind of connection. Without further elaborating on this matter, we simply say that, for the sake of simplicity and connectedness, we prefer the binary account, therefore establishing a division between a **semantic explanation relation** and a **pragmatic explanation relation**[33] (or, perhaps more transparently, between a **referential explanation** and a **discourse explanation**). Naturally both these classes of connections need to be subdivided. On one side, referential explanation has to cover numerous

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[31] Let us ignore the fact that Sweetser's performative analysis of (50) (unnecessarily) brings in more information than is conveyed by the causal clause in (49), going from *there's a good movie on* to *I want to suggest that we go see this good movie*. Obviously, such move requires the intervention of an implicature system.

[32] It is regrettable that one of the very few linguists working on Portuguese who reached a clear picture about conclusive and explicative constructions, having been inspired by Sweetser's work, also went along with her, repeatedly, in resorting to the kind of erroneous paraphrases we have been mentioning (see Lopes 2001 and 2004).

[33] This opposition is found in, a.o., van Dijk (1977) and Sanders *et al.* (2001). Lopes (2004) also adheres to this position.

differences related to a wide conceptual area that can involve notions like, e.g., "cause", "reason", "motivation", "justification" (or "explanation" itself), and oppositions like, for example, objective vs. subjective (cause, or other), intratextual vs. extratextual – i.e., speaker's (cause, or other) –, *de re* vs. *de dicto* (cause, or other), etc., the discussion of which lies well beyond the scope of this work. On the other side, pragmatic (or "discourse") explanation also requires, besides some if not all of the concepts of referential explanation, the distinction of, possibly among others, the following kinds of (explainable) speech acts: **deduced assertions**, **questions** (as in Sweetser's examples (48) and (49) above, respectively), and **commands**, as in:

(51) Despacha-te, que estamos atrasados.
      hurry-up-you that are late
      'Hurry up, because we're late.'

Of the just mentioned three subtypes of discourse explanation, the assertion and command types are the most frequently given as examples of explicative connection in the linguistic literature on Portuguese, grammars included. In view of our purpose of scrutinizing in the next section the treatment of these connections in that sort of literature, and considering the direct intelligibility of command explicatives, we will next briefly describe the pragmatic and semantic computation process of assertion explicatives in Portuguese.

3.2.2   Assertion (or epistemic) explicatives

In Portuguese, the conjunctions (simple or complex in form) that can convey the assertion explicative value (Sweetser's "epistemic") are at least the following: *pois, dado (que), visto (que), uma vez que, já que, pois que, porquanto, porque*. Let us concentrate on a very simple example of an assertion explicative construction:

(52) A Ana está contente, porque está a rir-se.
      the Ana is happy because is at laugh-herself
      'Ana is happy, since she's laughing.'

Leaving aside the bizarre referential (or "content") interpretation, which conveys the usually called "causal" or "reason" value (whereby Ana's laughing causes her to be happy), only the assertion (or "epistemic") explicative is available. Under this interpretation, the text in (52) – which is not a sentence, be reminded – performs two speech acts: one is the assertion *a Ana está contente*, the other is the utterance of the sequence *porque está a rir--se*, which acts as the explanation (or justification, or…) of the previous

assertive act[34]. Now, the second utterance plays the role of explanation because, as is well-known, it is part of a mode of reasoning of which it is one of the premises, the other being implicit. In the case under analysis, the implicit premise is: "if someone is laughing, he or she is happy". In other words, as Grice (1975) pointed out for the comparable case of conclusive attachments, the meaning computation of assertion explicatives involves an implicature relation between the explicative text and an implicit proposition.

In order to express the characterization of explicatives just made, we resort to the logical language of Propositional Calculus. In this environment, the interpretation of an explicative is conceived in terms of a sequence of two propositions (the premises in an argument or reasoning) and a third one (the conclusion) that is deduced from them (as the operator *portanto* indicates):

(53) a. A Ana está a rir-se.
     'Ana is laughing.'
   b. Se a Ana está a rir-se, está contente.
     'If Ana is laughing, she is happy.'
   c. Portanto, a Ana está contente.
     'Therefore, Ana is happy.'

What an assertion explicative does is first introduce the conclusion (without any operator), and then introduce the simplest premise (*a Ana está a rir-se*) by means of an explicative operator, taking the other premise (*se a Ana está a rir-se, está contente*) as implicit. This gives precisely the explicative text in (52). Making a different usage of the same propositional material, the speaker can instead first introduce the simplest premise without operator, again assume the conditional premise as implicit and then bring in the conclusion preceded by a conclusive operator. The result will be a conclusive attachment:

(54) A Ana está a rir-se; portanto, está contente.
    the Ana is at laughing-her therefore is happy
    'Ana is laughing; therefore, she is happy.'

In Propositional Calculus notation, if the sentence *a Ana está a rir*-se is represented by the letter *r*, and *a Ana está contente* by the letter *c,* the argument in (53) is schematically portrayed as follows:

(55) 1. r (explicit premise)
    2. $r \rightarrow c$ (implicit conditional premise)
        ———
    3. $\therefore c$ (conclusion)

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[34] Taking an (assertion, question or command, or other of the kind) explicative utterance as a distinguished kind of speech act in its own right arises as an attractive (and probably not original) idea that we won't explore here.

This argument schema, called Modus Ponens, is valid regardless of the propositions contained therein. This and all other argument schemata of the propositional calculus, also called "rules of inference", are nothing but practical tools for verifying the validity of logical arguments, built on the evidence that some propositions are tautologies. As to Modus Ponens, it originates in the following tautological formula (using now other letters, taken as variables over propositions, for the sake of abstractness): $(p \wedge (p \rightarrow q)) \rightarrow q$ (paraphrasing in natural language: if the proposition p is true and implies the truth of the proposition q, then this latter proposition is also true). Notice that, in general, the implicit conditional premise is generic, not of particular nature. For sentence (52), it could be something like – in English, to simplify – *if a person is laughing, that person is happy*, or *whoever is laughing is happy*, or *every person who is laughing is happy*, among other possibilities. The presence of such a premise would require a slightly more complex inferential process than just Modus Ponens, by which *Ana* would be appropriately related to the generic or universal expressions *a person*, *whoever*, or *every person*. We skip the details.

We also don't want to bring in – in a significant way, we mean – other aspects of the semantics of explicatives, one of them being the connection between Modus Ponens[35] and non-monotonicity. The first reason for our restraint is that this article is not intended to be an expert and complete study on the semantics of explicatives (or of other structures where the issue of non-monotonicity may arise). On the contrary, only the very basic aspects that contrast explicatives with other kinds of connections are of relevance here. Secondly, because non-monotonicity is not an issue that is specific to constructions interpretable in terms of Modus Ponens, instead pervading various linguistic structures, conditionals in particular. And, additionally, because non-monotonicity cannot be simply treated as a yes-no matter. Just to exemplify: given a language (possibly having to be an artificial one) where conditionals are always monotonic, if a proposition entails another one, the entailment is not affected if additional information is added to the antecedent. Adapting to a natural language (where conditionals are not strictly monotonic), if, for instance, someone says to another person *If you have an average salary, you must live comfortably*, the truth of the conditional is not affected if the proposition *you own a house* is added to the antecedent, resulting in *if you have an average salary and you own a house, you must live comfortably*. But, if, instead of *you own a house*, the proposition added to the

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[35] In Lopes *et al*. (2001) the remark is made that the Modus Ponens rule of inference applying in the semantics of explicatives is of the non-monotonic type, and, in a note, the authors stress that Peres (1997) did not craft this observation. Despite this alert, we persist in finding that the issue of non-monotonic reasoning would be perfectly lateral, even if with some ornamental effect, in an article like the present one.

antecedent is *you have ten children*, it is obvious that truth may well not be (monotonically) maintained[36].

3.3   Explicatives in Portuguese linguistics after the 1967 NGP

Over the last decade, several researchers working on European Portuguese have taken in hand a subclass of sentential connections that for some time (possibly, since 1967) had been considered as instances of clause coordination, under the label "explicative coordination" (cf., at least: Peres 1997; Lopes 2001, 2004; Lobo 2002, 2003; and Matos 2003, 2004). The impression one gets from such endeavours is that a clear notion of explicative connection is still all but available and shared in Portuguese linguistics. A brief incursion into the recent history of explicatives, that is, after 1967, may be of some help in understanding the present state of affairs. In section 3.4, we will look further back in history, very gratifyingly indeed, as will become evident.

3.3.1   The 1967 NGP: a landmark

The NGP[37] established five types of clause coordination: copulative, disjunctive, adversative, conclusive, and explicative (typical instances of the corresponding connectives being, respectively, the equivalents of English *and*, *or*, *but*, *therefore*, and *since*). Our brief survey of school grammars suggests that, along the XXth century, and before the 1967 decree, a subclass of conclusives started to be added to the previous coordination trio (cf., a.o., the *Gramática Elementar*, undated, but surely from or posterior to 1961, and Barros 1961), but the inclusion of an explicative type of coordination apparently came as a complete novelty in Portugal in 1967, most likely imported from Brazil, where the *Nomenclatura Gramatical Brasileira*, imposed by law in 1959, includes such a piece of taxonomy.

Given that the normative *Nomenclaturas*, both the Brazilian and the Portuguese one, merely consisted of lists of grammatical designations without any definitions or data, the vexing consequence was that, in some cases, grammarians interpreted the labels and created their own definitions. The final result is a chaotic mixture of notions, in different assortments, within the sum of so-called "causal subordination" and "explicative coordination", reflected in grammars and in the abovementioned recent literature.

As we said in Section 1 (cf. fn. 1), a new Portuguese linguistic terminology was made known in 2004 and fully put into effect in 2005. In this

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[36] Thomason (1997) is a good introduction to the non-monotonicity general issue. On natural language conditionals, the ideas expressed in van Benthem (1988), where a distinction is established between "local" and "global" monotonicity, and Kas (1993), where the opposite concepts are "inner-system" and "outer-system" monotonicity, are recommended readings.

[37] Reminder: the official Portuguese linguistic terminology, in force between 1967 and 2004 (cf. beginning of section 1.1).

new directive, the explicative connectives are subsumed under the class of "conclusive coordinating conjunctions" (our translation). The members of this class and the relation between conclusives and explicatives are defined in the following terms (in our translation):

> "Conclusive coordinating conjunction[:] A conjunction that introduces an element coordinated to another element with which it establishes a condition-consequence relation. This condition-consequence relation means that what is expressed in one of the coordinated elements is / can be a cause or condition for the situation expressed in the other coordinated element".

> "Usually, the grammatical tradition also mentions the explicative coordinating conjunctions, which, in this classification and according to the definition presented here, are included in the set of conclusive coordinating conjunctions."

The integration of conclusives and explicatives in a single class is obviously motivated by the general definition provided for conclusives, which, in a sense, suggests that the two semantic processes are the reverse of each other, given the same basic condition-consequence relation. The problem is that a definition of this sort can be appropriate for characterizing a conditional connection, but not a conclusive or an explicative. In fact, not only it mentions just one of the meaning components of these connections (not in proper terms, though), but also it hides all that concerns the crucial inferential processes that are involved in both cases. The TLEBS' account of the conclusive and explicative connections is, therefore, both inexact and incomplete.

3.3.2 Explicatives in conventional Portuguese grammars after the NGP

Post-NGP grammars make use of the term 'explicative', but no explicit characterization of the construction is ever provided. Ferreira and Figueiredo (1970) give for explicative coordination the (epistemic[38]) example *Estou doente, pois tenho febre* (*I am sick, for I have a fever*), and state that "the second claim is an explication of the state expressed in the first one" (cf. p. 36; our translations). The definition, which takes the state described in an assertion – *I am sick* – as the entity being explained, instead of the assertive act itself, is extremely inaccurate. Figueiredo and Ferreira (1973) (where explicatives are said to exist "when the second clause explains or justifies the idea contained in the first") give an epistemic and a speech act example: respectively, *está satisfeito, pois está a rir-se* (*he is happy, since he is laughing*) and *não chores, que a vida é luta renhida* (*don't cry, for life is a tough fight*") (cf. p. 29).

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[38] In this and following subsections, we will use, rather than our own, the more easily recognizable terminology of Sweetser (1990).

Cunha (1970) and Cunha and Cintra (1982), by asserting that "explicative conjunctions connect two clauses, the latter of which justifies the idea contained in the former" (cf. pp. 393 and 577, respectively; our translation) do not improve the situation. As for the data, the two grammars present a total of six examples (cf. pp. 393 and 403 in the first grammar, and pp. 577 and 594 in the second), two of which appear in both works, two only in the first, and two only in the second. The relevant point is that none of the examples is undoubtedly of the epistemic kind. They are given below (without the authorship reference, for the sake of perspicuity), first the common pair, then, in chronological order, the two pairs that appear in just one of the works:

(56) a. Vamos comer, Açucena, que estou morrendo de fome.
       go eat Açucena, that am dying of hunger
       'Let us eat, Açucena, for I am starving.'
    b. Um pouquinho só lhe bastava no momento, pois estava
       a little alone to-him sufficed in-the moment for was
       com fome.
       with hunger
       'Just a little was enough for him at the moment, for he was hungry.'

(57) a. Era tempo, pois alguém se aproximava.
       was time for someone himself came-closer
       'It was time, for someone was coming.'
    b. Não chores, que a vida é luta renhida: viver é lutar.
       not cry that the life is fight tough: live is to-fight
       'Don't cry, for life is a tough fight: to live is to fight.'

(58) a. Dorme cá, pois quero mostrar-lhe as minhas fazendas.
       sleep(s) here for want show-him the my lands
       [see the paragraph below for possible translations]
    b. – Eh, camarada, espere um pouco, que isto acaba-se já.
       hey, comrade, wait a little,e that this finishes-itself already
       'Hey, fellow, wait a little, for this will be over in a moment.'

Clearly, (56a) (57b) and (58b) are of the speech act type. (57a) is ambiguous between the content and the epistemic values, only the context permitting disambiguation. (58a) is not properly ambiguous, but it has two interpretations, depending on matters of speech act and values of the verb form: if the text is taken as assertive (meaning *he will sleep here, as I want to show him my estate*), the content value (i.e., involving causal subordination) appears to be more likely than the speech act value; if, instead, the text is clearly endowed with a directive force (meaning *you sleep here, because I want to show you my estate*), then a speech act explicative is in force. As for

(56b), we can only get the content reading, which makes it an example of causal subordination. We believe the authors' choice of this example is related to another factor of variation that is often relevant in the domain of (linguistic) causality (again, we would prefer "explanation"), and wasn't mentioned here as yet. This factor can be defined as "responsibility in the assignment of the cause / explanation", and it can have at least two values: **text responsibility** (that is, where the explanation is taken as provided by a text entity), and **discourse responsibility** (that is, where the explanation is taken as provided by the utterer of the text). In our view, the second value is not coincident with the speech act value, but rather both values belong in the content domain (i.e., are instances of causal subordination). If this distinction should be and is assumed, it becomes clear that the two interpretations are available for a sentence like (56b), and it is quite probable that the authors being referred to only had the discourse responsibility reading in mind. For space restrictions, we cannot further elaborate on this point.

The kind of definitions of the explicative connection we have discussed above were commonplace in most, if not all, post-NGP grammars. In the absence of any definitions or examples in the NGP (a mere list of designations, as we said), each grammarian tried to forge his own definition and supply his data. Regrettably, both endeavours were accomplished rather infelicitously. In fact, the definitions are either void of meaning or circular, clearly showing that a precise notion of explicative connection was inexistent at the time. As for the data, as was shown, not only the difference between the speech act and the epistemic values was not established, but also examples were given that clearly belong in the content domain (or, again, in other terms, in causal subordination).

The brief scrutiny presented above shows that, along the surveyed period, no distinction between Sweetser's three types was ever recognized. Moreover, the NGP introduced the term 'explicative' without an explicit characterization of the kinds of structures that fall under the concept. As a result, Cunha and Cintra's decisions regarding which connectives and examples correspond to which notion (viz., causal subordination and explicative coordination) came to be the most influential work on subsequent linguistic research on this subject.

3.3.3   *Explicatives in essays after the NGP*

Lobo (2003) doesn't explicitly distinguish between content and epistemic or speech-act structures. In fact, she adopts a binary distinction, between causals and explicatives, which seems to be strictly syntactic: for her, both structures express 'cause', the main question being whether it is true that the former do so by a subordination process and the latter by coordination. Taking up Cunha and Cintra's list of causal and explicative connectives, she submits the compound sentences formed with them to a battery of syntactic tests, namely initial position, subjection to coordination, connection of non--sentential constituents and clitic placement.

The author consistently presents for each of the abovementioned tests two examples with the connective *porque*, one clearly epistemic, the other ambiguous between an epistemic and a content reading. The former kinds of examples yield ungrammatical results to the tests, while the latter deliver a grammatical output. Witness, for instance, her examples for the initial position test, whose judgements we agree with:

(59)　*Porque vi a luz acesa, o director está cá.
　　　　because saw the light on, the director is here
　　　　'Since I saw the lights on, the director is here.'

(60)　Porque estamos todos de acordo, não haverá votação.
　　　　because are all of agreement, not will-be voting
　　　　'Since/because we all agree, there will be no voting.'

Lobo suggests that "[these results] may be due to the fact that the same connective seems to be able to assume two different functions – coordinative and subordinative" (cf. p. 48), thus apparently identifying the contrast between (59) and (60) exclusively with syntactic structure. Although she admits that the behaviour of the explicative connectives "*pois*, *que* and (explicative) *porque* may be attributed (…) to the specific semantics of these structures" (her parentheses, cf. p. 52), on the one hand she seems to only aim at explaining why these connectives can't operate between non-sentential constituents, and, on the other, she presents no substantive semantic criterion for capturing the distinction. Crucially, the difference in the test results of *porque* remains unexplained by the author's chiefly syntactic interpretation of such results. To us, it seems clear that example (60) can only be grammatical under a content reading, which amounts to saying that the pre-positioning of a *porque*-clause bars epistemic (and, presumably, speech act) readings.

As for the other connectives tested by Lobo, the relevant values are not always considered. Take, for example, the following sentence, attesting as to the ability of *por* to be subject to coordination (cf. p. 49), where a content reading appears to be the only available:

(61)　A cidade ficou deserta por ser feriado e por estar a chover.
　　　　the city became deserted for be holiday and for be at rain
　　　　'The city was deserted for it was a bank-holiday and (for) it was raining.'

While we agree that (61) is a perfectly grammatical sentence, we find that the connective *por*, subcategorising infinitival clauses, can hardly assume an epistemic or speech-act value. Confront Lobo's example with our sentence (62) below:

(62) # A Ana tem trabalhado muito, por ter umas olheiras enormes.
   the Ana has worked a-lot for have a dark-circles huge
   'Ana has been working a lot, since she's got huge dark circles.'

While the former, with a content reading, is perfectly adequate, the latter, where the only reading available is of the epistemic kind, sounds extremely unnatural to our ears.

   Lobo's pairs of examples with *porque* (such as the pair reproduced above as (59) and (60)), as well as the contrast we pointed out in the previous paragraph with respect to *por*, clearly prove that, at least with some connectives, different semantic types yield different results to eminently syntactic tests. Although Lobo does recognize that the semantics of these structures may play a role here, she proceeds to draw conclusions based on her syntactic tests results alone, namely, that a subclass of causal connectives, *pois*, *que* and (what she calls) explicative *porque*, display a kind of behaviour that is very similar, though not identical, to that of coordinative connectives.

   From our standpoint, this conclusion is utterly inadequate. Clearly, a rigorous selection of examples with respect to their semantic type is paramount to the characterisation of causal or explicative connections, since different semantic types yield different test results. More to the point, these semantic considerations play an important role, even if Lobo's objective was solely that of identifying the kind of syntactic dependency at stake. Furthermore, attempts to characterise the distinction between explicative and causal connections strictly in terms of coordination and subordination lead to undesirable conclusions: among Lobo's list of thirteen causal (in the broad sense, encompassing all of Sweetser's types) connectives, only three of them qualify as (quasi-)coordinative, one being the all-purpose *que*, most likely derived from a simplification of *pois que*, or even *por que*. We tend to think there exist morphological and historical reasons that justify that these connectives have particularly restricted uses. Therefore, and seeing no meaningful motivation, both on semantic and syntactic grounds, for their *sui generis* behaviour, we find their establishment as a syntactic class a methodologically dubious step and an inconsequential result for the grammar of Portuguese.

   Finally, we briefly comment on Matos' (2003, 2004) considerations on explicatives[39]. This author adopts Cunha and Cintra's set of explicative connectives (*que*, *porque*, *pois*, and *porquanto*; cf. p. 577), and reaches the conclusion that "the explicative connectives must be characterized as complementizers, which introduce finite causal subordinate clauses" (p. 573, our translation). We could not be more in disagreement with this stance, which blatantly contradicts what, along this article, we claimed to be a well--founded characterization of subordination. Accordingly, Matos' final results

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[39] The second text is part of Mateus *et al*. (2003), a non-conventional grammar, closer to a collection of author's essays.

are totally uninteresting to us. Nevertheless, we can't help expressing our surprise at the careless classification that Matos inflicts upon her data. Take the following examples of her "explicatives" (cf. 2003: 572-3):

(63) Eles admitiram ter assaltado a loja pois estavam a planear fazê-lo.
they admited have robbed the store since were at plan do-it
'They admited to have robbed the store since they were planning to do so.'

(64) A criança pediu para se ir embora por já ser tarde.
the child asked for herself go away for already be late.
'The child asked to leave due to its being late.'

These examples, which are not exceptions, but the epitome of what Matos (2003) takes to be an explicative, undoubtedly are of Sweetser's content type, definitely discarding the explicative connection.

As for Matos (2004), the text shows considerable progress regarding the semantic notion of explicative connection ("explicatives express the motive behind the speaker's utterance", p. 556, our translation). However, the author insists in returning to the list of "explicative conjunctions" based on just the argument of authority – it is Cunha and Cintra's list, and that suffices – without by any means providing a semantic characterization of the connectives at stake. Nevertheless, already on the second page of her paper, Matos reaches the appalling conclusion that "the distinction between the different kinds of causal clauses must be based, not on semantic criteria, but on formal ones" (*ib.*, our translation), a conclusion that is drawn from solely the fact that the members of the famous list can also have another value: "explicative conjunctions [can also] occur in sentences that express the real reason of a situation" (*ib.*, our translation). Notice that, incidentally, this overlap was clear from the beginning, since Cunha and Cintra (1984) overtly give the four connectives at stake in both the classes of causal and explicative conjunctions. Hence, by simply working on uncharacterized and possibly arbitrary lists, Matos perfunctorily sets semantics aside and engages in her kind of syntax, clearly ignoring that the very same connective form can display different syntactic behaviours in response to the same test if the semantic type is changed. Dispensing with semantics in this kind of investigation, even if syntax-centred, is nothing but absurd.

To summarize, from our point of view, the meagre goal of obtaining two distinct lists of connectives is a pointless task. Rather, a distinction defined in Sweetser's terms establishes a sound basis for the definition of explicative and causal connections, with the classes so defined showing consistent behaviour in respect of the tests we worked on in section 2 of this article and certainly on several others. Naturally, we admit that issues concerning the syntactic behaviour of some connectives are bound to arise, as discussed in both Lobo's

and Matos' works. What we challenge is, on the one hand, the thesis that these particular behaviours can be the only basis for a meaningful distinction and establishment of classes of inter-sentential connections, and, on the other, the methodological hypothesis that semantic criteria can be dispensed with in the characterization of inter-sentential connectives.

3.4 The pre-NGP picture: some reassuring history

Not very surprisingly, our survey of pre-NGP Portuguese grammars showed that no author contemplated a class of 'explicative' clauses, In fact, in the absence of an explicit norm, the explicative connections (in the NGP sense) were totally absent from the grammars[40], whereas conclusives were in some cases considered. For instance, the Port-Royal oriented grammarian Jeronymo Soares Barbosa contemplates a class of conclusives (cf. 1833: 251), although not within the macro-class that would be nowadays classified as "coordination" (instead, as part of a macro-classs that encompasses all subtypes of embedded clauses, on a par with adversative and conditionals – undoubtedly, a radically different view from today's). Dias (1894), in turn, considers only three subclasses of clause coordination: copulative, disjunctive, and adversative (cf. p. 119).

Nonetheless – and this time, if not surprisingly, certainly agreeably – examples of Sweetser's three relation types discussed in section 3.1 above, were generally given, albeit undifferentiated, under chapters on causal subordination (cf., e.g., Barbosa 1830, the *Gramática Elementar*, and Barros 1961). Barros (1961), for instance, includes the following examples – corresponding, respectively, to Sweetser's content, epistemic and speech-act relations – gathered under causal subordination:

(65) Pasteur foi um sábio de grande coragem porque descobriu
      Pasteur was a wise-man of great courage because discovered
      a cura da raiva.
      the cure of-the rabies
      'Pasteur was a wise man of great courage because he found the cure for rabies.'

(66) Hoje choveu, pois a terra está molhada.
      today rained since the earth is wet
      'Today it rained, since the earth is wet.'

(67) Perdoa-lhe, porque não soube o que fez.
      forgive him/her because not knew the that did
      Forgive him/her, for he/she knew not what he/she did.

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[40] In some cases, a class of "explicativas" is defined, but in the sense of Latin grammar, where it involved the equivalents of connectives like *isto é (that is)*, or *principalmente* (*mainly*) (cf. Barbosa 1830: 247).

Strictly speaking, example (65) is ambiguous between a content and an epistemic reading, (66), with the connective *pois* (given in the section on conjunctions), is of the unmixed epistemic type, and (67) is a neat example of the speech act variety.

Remarkably, Dias (1917), although including similar examples in the section on causal connectives, without an explicit differentiating taxonomy, does seem to be sensitive to a Sweetser-like distinction. Under paragraph 386, Dias provides examples for a subclass of connectives whose behaviour he describes as follows:

«Servem de apresentar o que justifica o enunciado da or. subordinante. (…) Com *já que* exprime-se que, em vista do facto enunciado na or. causal, é de razão que se verifique o conteúdo da or. subordinante (...) *Visto que* (*visto como*), faz sobresahir a ideia de ser o enunciado da or. subordinante devido à consideração do conteúdo da or. causal (...).»[41]

His examples, however, don't distinguish between epistemic and speech-act relations, and some are ambiguous. Only one of them (from Padre António Vieira) is unquestionably an instance of Sweetser's epistemic relation:

(68) O que importa he que, pois temos o remedio tão prompto,
      the that matters is that, since have the remedy so ready
      tão poderoso e tão propício, nos socorramos delle a tempo.
      so powerful and so favourable, ourselves use of-it in time
      'What matters is that, since we have a remedy so very much at hand,
      so powerful and so favourable, we use it in time.'

Also noteworthy is Said Ali's (1931) discussion of paratactical (coordinative) causal clauses, whose characterization seems to intuitively capture the relevant semantic type (our italics):

«Dá-se ainda [parataxe] se a segunda oração é causal, e se usa, sem conjunção ou com a partícula *porque*, tendo esta o sentido do francês *car*, inglês *for*, alemão *denn*; quer isto dizer, a proposição causal constituirá um pensamento à parte, podendo haver uma pausa forte entre ela e a proposição inicial.»[42]

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[41] «[they] function as introducers of a justification for the proposition given as main clause. (…) With *já que* one means that, given the fact expressed in the causal clause, it stands to reason that the content of the main clause be true. (…) *Visto que* (*visto como*) underlines the idea that the proposition present in the main clause is due to consideration of the content of the causal clause (…).»

[42] «One can also find parataxis when the second clause is causal and no connective or the particle *porque* is used with the sense of French *car*, English *for*, German *denn*; that is, the causal proposition constitutes a separate thought, and a substantive pause may occur between it and the main clause.»

To conclude, we are glad to find out that, going back in time, one can find grammarians of Portuguese that had deep intuitions on complex matters, which were much later acknowledged in the international literature. In the same line of thought, now with some regret, we wonder what may have happened in most of twentieth century linguistics (not only, but also) of Portuguese for certain topics, where inter-sentential connections are included, to be treated in so uninteresting, when not purely erroneous, a manner.

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