Coordination and Subordination

Coordination and Subordination:

Form and Meaning— Selected Papers from CSI Lisbon 2014

Edited by

Fernanda Pratas, Sandra Pereira and Clara Pinto

Cambridge
Scholars
Publishing

TABLE OF CONTENTS

FOREWORD:
CHALLENGING THE FRONTIERS BETWEEN "NATIONS"

FERNANDA PRATAS, SANDRA PEREIRA AND CLARA PINTO

1. Introduction

Complex sentences have been at the core of cross-linguistic studies over the past decades. As a way to account for the linkage between clauses within these intricate structures, the traditional coordination/subordination divide has certainly proved crucial, offering a basis for the development of numerous ground-breaking formal tools, both in syntactic and in semantic domains.

More recent studies, however, have defied this traditional boundary, either because they have gone further into the theoretical implications of prior analyses or because they are focused on novel data: from still scarcely studied languages, from dialectal and diachronic variation or from language acquisition (cf. Haspelmath 2007, Ledgeway 2007, van Verstraete 2007, among many others).

Before describing some of these challenges, we must say that there are indeed two types of clauses that seem to exhibit a syntactic behaviour as, respectively, coordinate clauses and subordinate clauses. The first type concerns clauses headed by connectives like 'and'/'or', the second type consists of typical complement clauses. The fundamental syntactic properties of coordination, as opposed to subordination, were identified by Quirk *et al.* (1985) and have acquired a status of syntactic tests to distinguish one type from the other. With Quirk *et al.* (1985) as a point of departure, Lobo (2003) applied some of these syntactic tests to numerous clauses, mainly in Portuguese, and her results show that the behaviour of what we call here the first type is the exact opposite of the second (Lobo 2003:39). More specifically, clauses headed by *e* 'and' or by *ou* 'or' reject: (i) embedding, (ii) being preposed, (iii) extraction, and (iv) coordination; in European Portuguese (v) they do not trigger proclisis. Moreover, the

connectives 'and'/'or' may link (vi) non-clausal units, like noun, verb, adverb or adjective phrases, and (vii) more than two elements. Some complement clauses seem to display reverse results in all these tests. Therefore, under a strictly syntactic perspective, we could have here a clear division between these two groups, the first representing coordination, the second illustrating subordination.

Just after this preliminary point of the description, however, one first problem immediately pops up: what about all the other clause types that have generally been subsumed under the subordination label? Adverbial clauses, for instance, which, besides being a particularly heterogeneous set of constructions themselves, may create different kinds of interlacing relations with other structure types. In fact, bigger challenges arise when we attempt to go further in either one of four directions:

A. take the syntactically coordinate clauses mentioned above and try to confirm their real meaning in *various specific contexts* (some of them may in fact have a subordinate-like interpretation)

B. take some apparently subordinate clauses and consider their *occasional use* as independent propositions;

C. question why there should be any severe divide between some types of clauses, just (presumably) because they have different syntactic configurations, even if their meaning is *always* so similar;

D. analyse in detail the strict syntactic status of other types of structures traditionally placed on the coordination or the subordination shelves; they may show more or less contradictory results in the above mentioned tests and, moreover, may have undergone significant diachronic changes.

The workshop CSI Lisbon 2014 has been a privileged stage for discussing these challenges to the traditional confines of coordination and subordination, along with various formulations of the properties of various complex clauses. Both typological studies and formal grammatical analyses within a generative framework were encouraged, and the outcome was an intense debate anchored on the innovative insights that novel linguistic data allow for.

The papers in this volume, all of them resulting from works presented at the workshop, appear by alphabetical order of the authors' surnames, and are briefly introduced in the next sections. Section 2 presents one paper focused on two particular coordination connectives, and one paper that discusses a specific case of adverbial subordination. Section 3

describes the papers that elaborate on different expressions of syntax/semantics mismatches. Finally, section 4 presents the papers devoted to the analysis of phenomena that, one way or the other, challenge the syntactic barriers between different types of clauses.

2. Theoretical (re)definitions in syntax

In this section, we present two papers that do not actually confront the syntactic boundaries between the types of constructions under analysis in this volume. One of them describes some properties of two coordination connectives, and the other discusses the syntax of adverbial subordination.

When we consider a 'with' vs. 'and' divide among languages regarding coordination, Creoles have often been classified as 'with'-languages. **Hassamal** (p. 135), however, analyses the behaviour and restrictions of two coordinating conjunctions in Mauritian, a French-based Creole, and argues that both *e* and *ek* (the latter originates from the French preposition *avec* 'with') are 'and' conjunctions. Interestingly, this conjunction *ek* coexists with the true preposition *ek* 'with'. In (1) we find an example of *ek* as a preposition; in (2) *ek* is a conjunction.

(1) *Paul ena enn lakaz **ek**/avek zardin.*
    Paul have one house with   garden
    'Paul has a house with garden.'

(2) *Mo pe   al laplaz ar   Paul **ek** ar Marie.*
    1SG PROG go beach   with Paul and with Marie
    'I am going to the beach with Paul and with Marie.'

Although the conjunctions *e* and *ek* show the same syntactic behaviour, which the author formalizes within the HSPG framework (Head-driven Phrase structure grammar; Pollard & Sag 1987 and subsequent works), there are some differences at the interpretation level: in cases of clausal coordination, the conjunction *ek* conveys the reading of a single event, with the two simultaneous sub-events being an extended effect of its specialization in the coordination of noun phrases.

The core debate on adverbial subordination is frequently concerned with the exact structural point where integration takes place. **Von Wietersheim & Featherston** (p. 269) discuss this specific aspect of clause linkage in German, adopting the division (Haegeman 2003, 2004; Frey 2011) into central adverbial clauses (CACs), like the one in (3), and peripheral adverbial clauses (PACs), like the one in (4).

(3) *Anna hört   Musik, während sie morgens* durch   den Park joggt.
   Anna listens.to music while   she mornings through the park runs
   'Anna listens to music while she runs through the park in the morning.'

(4) *Anna faulenzt abends, während   sie morgens durch den Park joggt.*
   Anna relaxes   evenings while/whereas she mornings through the park runs
   'Anna relaxes at home in the evening while she runs through the park in the
   morning.'

They investigate whether binding, in particular the violation of Principle
C, can work as evidence for structural integration of 'while'-clauses, thus
helping determine their more central or peripheral status (cf. Lohnstein
2004). They use various experiments to gather more precise clues about
the complex relations between these adverbial clauses and the matrix
clauses, and, along the way, also find evidence to question the proper role
of Principle C and the true nature of binding idiosyncrasies.

3. Syntax / semantics mismatches

This section subsumes the challenges described as A., B. and C. in section
1. They all concern a certain lack of correspondence between the syntactic
status of some structures and their possible meanings. The three papers
presented in subsection 3.1 analyse syntactically coordinate structures that
may have a subordinate meaning. The paper presented in subsection 3.2
investigates constructions that show a different mismatch: they have a true
independent interpretation whereas, syntactically, they seem subordinate
clauses. Subsection 3.3 presents two papers related to one of those
problematic pairs of semantically similar sentences whose syntactic status
has been subject to cross-linguistic debate.

3.1. Coordinate clauses with a subordinate meaning

The challenge described in A. (section 1) concerns some well-known
syntax/semantics mismatches, and to exemplify this we also use here one
much cited case involving the coordinator 'and' (Culicover & Jackendoff
1997:196):

(5) One more can of beer and I'm leaving.
   Meaning: 'If you have one more can of beer, I'm leaving.'

Another good example of this, but involving a coordinator of the type 'or', is the Portuguese sentence in (6), which also has the interpretation of a conditional structure:

(6) *Sentas-te   já   ou ponho-te   de castigo.*[1]
    sit:PR.2SG-2SG   now or put:PR.1SG-2SG of ground
    Literal: 'You sit now or I ground you.'
     Meaning: 'If you don't sit right now, I will ground you.'

Thus, at the semantic level we have a subordinate relation, syntactically expressed as a type of coordination.

Another case of European Portuguese constructions that semantically are subordinate but, according to **Brito & Matos** (p. 45), behave syntactically as an instance of coordination is illustrated in (7).

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

In constructions where consecutive clauses, be they finite or non-finite, have an antecedent, we get a clear relation of subordination at all levels. For the so-called free consecutives (cf. Giusti 1991), like the one in (7), the authors argue that the syntactic relation established is in fact of coordination, which in some cases is of juxtaposition – these structures involve an intricate connection between the first clause and a quantifying expression in the consecutive clause. There is, therefore, a case of disparity between syntax and semantics, since, despite their coordinate

---

[1] In Lobo (2003: 60 fn40), there is a variation of this example for Portuguese with a structure of the type 'either'… 'or':

    (i) *Ou te   sentas   ou ponho-te   de castigo.*
       or 2SG sit:PR.2SG or put:PR.1SG-2SG of ground
       Literal: 'Either you sit, or I ground you.'
       Meaning: 'If you don't sit, I will ground you.'

We find, however, that this example does not meet our objectives at this specific point: this structure, despite having been traditionally classified as an instance of coordination, does not fit in with the syntactically well-behaved coordinate clauses whose meaning we intend to question. In fact, correlatives are problematic for a coordination analysis even at the syntactic level. Therefore, this example would, at most, be a good choice to illustrate the challenge that we enunciate in C.

behaviour, the free consecutive is interpreted as a modifier of the whole previous sentence.

Several syntactic and semantic (dis)similarities between specific coordinate clauses and some peripheral adverbial clauses have also been subject to cross-linguistic debate. This is the object of study in **Canceiro** (p. 69). In order to account for the point of embedding of these constructions in European Portuguese, she uses a Reference Judgment Comprehension Task (McDaniel and Cairns, 1990 a,b) to investigate the referential relations established by omitted subjects. The author tests different types of coordinate constructions, such as copulative coordination (example in (8)), and contrasts them with, for instance, non-peripheral adverbial clauses like the one in (9).

(8) [-] *deu   aulas   e   ele estudou   Biologia.*
    [-] taught.3SG classes and he   studied.3SG Biology
    '[…] taught classes and he studied Biology.'

(9) *Ela podia comer um   bolo porque ela foi   à   padaria.*
    she could eat   one cake because she went to.the bakery
    'She could eat a cake because she went to the bakery.'

Although the general results seem to indicate that binding, which involves c-commanding relations and, thus, unambiguous syntactic hierarchies, can be a useful test to understand how fully integrated a clause is, in some cases the informants' interpretation suggests another path.

Similarly, Mandinka exhibits various cases of ambiguity between subordination and coordination, and several examples are discussed by **Creissels** (p. 119), who presents a wide range of data from this still scarcely studied West African language. Some independent assertive utterances in juxtaposition, for example, can sometimes be interpreted as having a purpose reading. This is the case of the sentence in (10), which can have two different interpretations: the first one corresponding to a purpose clause and the second one to juxtaposition.

(10) *I   wúlí-tá   ka   táa.*
     3PL rise-CPL INF leave
     1. 'They rose in order to leave.'
     2. 'They rose and left.'

Even more intriguing is the case of some adverbial-like constructions that have a coordinate-like interpretation (in fact, they do not act as modifiers). This coexists with apparently identical purpose adverbial constructions,

which involve an infinitive or subjunctive clause and are properly classified as instances of subordination.

3.2. Not as subordinate as they seem

The challenge mentioned in B. (section 1) concerns, among others, the phenomenon known as insubordination (Evans 2007). This occurs with sequences like the one in (11):

(11) If you could just sit here for a while, please.   (Evans 2007)

This sentence exhibits the morpho-syntactic features of an adverbial clause (more specifically, a conditional). In this particular use, however, its subordinate status can be questioned, either under the syntactic or the semantic point of view. As Evans (2007) points out, it actually functions as a request.

Studying these structures in English under a diachronic perspective, **Schröder** (p. 245) defends that we should not try to define dependency on syntactic grounds, but rather by using semantic and pragmatic criteria. She examines four corpora of Early Modern English and provides the answer to two questions, one on the statistic evolution of the use of these constructions, the other on the relations between insubordination and different types of structures.

3.3. Different and yet so similar

The challenge stated in C. (section 1) explicitly concerns pairs of clause types like (i) adversative/concessive clauses, and (ii) explicative/causal clauses. The first elements in these pairs have traditionally been analysed as instances of coordination, the second elements have been classified as a case of subordinate relations. The syntactic tests in Quirk *et al.* (1985), however, do not present clear results. Take, for instance, English causal clauses headed by 'for'. In spite of being recognised as a case of subordination, they cannot be preposed (cf. Quirk *et al*: 922), a restriction that is associated with coordination.

Different contradictions are also attested in other languages. Consider the following examples in French (Lobo 2003:44-45, following Piot 1988):

(12) a. Jean n'est pas venu, *car* il est malade.
     b. *Car* il est malade, Jean n'est pas venu.

(13) a. Jean n'est pas venu *parce qu*'il est malade.
     b. *Parce qu*'il est malade, Jean n'est pas venu.

Regarding restrictions on movement, *car* looks like a coordinator, whereas *parce que* behaves like a subordinator (clauses headed by *car* cannot be preposed, a restriction that is not imposed on clauses headed by *parce que*). On the other hand, *car* presents some properties that are typical of subordinators, clearly distinguishing it from French coordinators of the type 'and' or 'or'.

Moreover, many of the sentences used to illustrate the elements in each of the pairs mentioned above – adversative/concessive clauses and explicative/causal clauses – are truly semantically related (cf. (12a) and (13a)). For many speakers across languages, numerous instances of these are indeed difficult to distinguish.

In European Portuguese, some causal constructions challenge the definition of coordination as a form of clause linkage that does not create any structural dependencies. In these cases, as **Aguiar & Barbosa** (p. 1) point out, the coordinate conjunction *e* 'and' "establishes an asymmetric semantic relation between the terms conjoined" (cf. Blühdorn 2008), as can be seen in (14).

(14) *O   João não viu o   chão molhado e   escorregou.*
    the John not saw the floor wet   and slipped
    'John didn't notice the wet floor and slipped.'

The authors study these constructions under a sociolinguistics approach, following the variationist model (Labov 1966, 1994, 2000). They anchor their analysis on the premise that "syntactic structures that unequivocally indicate the type of relation established are easier to process (Noordman & Blijzer 2000), as opposed to syntactic connections whose semantic relation established is inferred", and try to identify the possible connections between some social variables (especially the level of education) and the use of specific linguistic variables, such as the type of syntactic structure and the connective.

Also focused on the various uses of causal structures is the study by **Catasso** (p. 93). In standard German, clauses headed by *weil* 'because', like the one in (15), can be taken as an instance of coordination (cf. Antomo & Steinbach 2010).

(15) *Das macht Berlin hauptsächlich, weil   die   haben auch eine*
    that does   Berlin mainly   because they have   too   a
    große Zahl   von Italienern.
    big   number of Italians
    'Berlin does that primarily, because they have a large number of Italians, too.'

It has also been suggested (Pasch 1997) that their emergence is due to the lack of *denn*-clauses in spoken language. The fact that these structures exhibit a Verb Second (V2) word order, which in German is typical of independent structures (in contrast with the Verb final configurations of subordinate clauses), favours these paratactic proposals. Catasso, however, discusses all the arguments involved in these and other previous studies, and puts forward a subordinate analysis for these *weil*-clauses, taking a comparative perspective and grounding his views on syntactic evidence. Among the contributions of his paper to the cross-linguistic comprehension of explicative/causal clauses is the idea that the pragmatic implications of these structures may be more relevant than their syntactic classification as coordinate or subordinate.

4. Contradictions at the strict syntactic level

Finally, this section is devoted to the challenge pointed out in D. (section 1), which concerns the syntactic behaviour of several clause types. In other words, even under a strict syntactic analysis, various forms of complex sentences do not fit in well with any of the traditional labels (subsection 4.1). Some others have moved from one shelve to the other (4.2).

4.1. Synchronic complications

The serious problems to the syntactic diagnostics for some clause types may be exemplified by the comparative constructions in languages like Portuguese. Consider the sentence in (16), of the type analysed in Pereira, Pinto and Pratas (2014):

(16) *O   Pedro comprou mais livros do que o   João me deu.*
    the Pedro bought   more books *do que* the João 1SG gave
    'Pedro bought more books than João gave to me.'

Are comparatives like this a case of subordination? If so, do they involve adverbial clauses or relative clauses? Furthermore, how can we accommodate the fact that, whereas they do indeed exhibit some word

order restrictions typical of subordination (namely, obligatory proclisis), they also show some features of coordination, such as their behaviour regarding ellipsis or the properties of their connectives?

According to **Paul** (p. 185), several constructions in Mandarin Chinese, such as adverbial clauses like (17), also raise serious problems to the traditional syntactic classifications.

(17) *Rúguǒ tā   bù   lái,   wǒ   jiù   zìjǐ   qù.*
     if   3SG   NEG come 1SG then self go
     'If he doesn't come, I'll go on my own.'

Illustrating her investigation with many relevant examples of the language under study, she acknowledges the fact that some properties in focus here apply to other languages as well. The author discusses the categories conjunction and adverbial subordinator, and also the exact point at which an adverbial clause is merged in the structure (in Mandarin Chinese, some are merged at a topic projection, which is higher than the main clause).

Some other constructions that, in different languages, have raised several syntactic problems are correlative comparatives (CCs). **Bîlbîie** (p. 23) illustrates this with, among others, the examples in (18) for English and in (19) for Romanian.

(18) The more I read, the more I understand.

(19) *Cu cât   citesc (mai mult), cu atât   înțeleg   (mai bine).*
     with how-much I-read (more),   with that-much I-understand (better)
     'The more I read, the more I understand.'

In her analysis, the author assumes that: semantically, CCs always involve a relation of conditionality and/or proportionality; syntactically, they can assume different patterns and, therefore, "a universal macrosyntactic structure that holds cross-linguistically cannot be proposed" (*contra* Den Dikken, 2005). She discusses data from English and also from several Romance languages, including Romanian, and relies on the HSPG framework to elaborate on her proposal.

4.2. Diachronic transitions

The effects of diachronic change on the syntax of some constructions can also be very interesting, since it is not clear why and how a type of structure can make the transition between coordination and subordination, in either direction. One example of this is the contemporary Portuguese

senão (cf. Colaço 2005), which, despite being considered a marker of coordination, exhibits an intriguing behaviour. Martins, Pereira and Pinto (forthcoming) show that contemporary *senão* originates from the reanalysis of *se* 'if' + *não* 'no' in Old Portuguese negative conditionals. This evolution may account for the different behaviour of the structures headed by *senão* when compared to other instances of exceptive coordination.

Pseudo-coordination is another phenomenon that results from a diachronic change in the structure of complex sentences. **Ross** (p. 209) investigates contemporary verbal pseudo-coordinate constructions, which, cross-linguistically, use a connective of the type 'and' but do not obey the criteria that define typical coordination. For instance, they tolerate unbalanced extraction, as in (20).

(20) Here's the whiskey which I went (to the store) and bought.

The author illustrates this phenomenon with a wide range of data from different languages of the world: from Europe, Africa, the Middle East, Asia, Oceania and the Americas. According to him, from a sample of 325 languages (see WALS: Haspelmath *et al*. 2005), 46 are considered to display pseudo-coordination.

Ledgeway (p. 157) assumes the existence of "genuine coordination" and applies all its relevant syntactic tests to show that, synchronically, the structures from the Apulian dialects, Italy, illustrated in (21) are a case of pseudo-coordination, "namely subordination".

(21) *Va   a   chiama.*
     he.goes   and   he.calls
     'He goes to call.'

In his detailed study of aspectual constructions with 'go'/'stand', the author discusses a particular diachronic case of grammaticalization that is also visible today, since some dialects illustrate a transitional phase. The evolution in question is from biclausal coordination, where the two conjuncts were linked by a coordinator, to monoclausal subordination, the second conjunct being now a complement clause. This change is deeply related to the behaviour of those aspectual predicates, which have undergone inflectional attrition to become aspectual markers.

The results of this investigation will certainly provide insightful information on, among other topics, the properties of the clause functional structure. Importantly, they have already demonstrated that, as Ledgeway

puts it, "the formal boundaries between coordination and subordination are considerably more fluid than is often assumed."

Acknowledgements

References

ANTOMO, Mailin and Markus STEINBACH. 2010. Desintegration und Interpretation. *Weil*-V2-Sätze an der Schnittstelle zwischen Syntax, Semantik und Pragmatik. *Zeitschrift für Sprachwissenschaft* 29: 1-37.

BLÜHDORN, Hardarik. 2008. Subordination and coordination in syntax, semantics and discourse. Evidence from the study of connectives. In Cathrine FABRICIUS-HANSEN and Wiebke RAMM (eds.) *'Subordination' versus 'Coordination' in Sentence and Text. A cross-linguistic perspective*. Amsterdam, Philadelphia: John Benjamins, 59-85.

COLAÇO, Madalena. 2005. *Configurações de Coordenação Aditiva: Tipologia, Concordância e Extracção*. PhD Dissertation. University of Lisbon.

CULICOVER, Peter W. and Ray JACKENDOFF. 1997. Semantic subordination despite syntactic coordination. *Linguistic Inquiry* 28(2): 195-217.

DEN DIKKEN, Marcel. 2005. Comparative correlatives comparatively. *Linguistic Inquiry* 36: 497-532.

EVANS, Nicolas. 2007. Insubordination and its uses. In Irina NIKOLAEVA (ed.) *Finiteness*: *Theoretical and Empirical Foundations*. New York: Oxford University Press, 366-431.

FREY, Werner. 2011. Peripheral adverbial clauses, their licensing and the prefield in German. In E. BREINDL, G. FERRARESI and A.

VOLODINA (eds.) *Satzverknüpfung – Zur Interaktion von Form, Bedeutung und Diskursfunktion*. Berlin: de Gruyter, 41-77.

GIUSTI, Giuliana. 1991. Le frase consecutive. In L. RENZI and G. SALVI (orgs.) *Grande Grammatica Italiana di Consultazione*, volume II. Bologna: Il Mulino, 820-827.

HAEGEMAN, Liliane. 2003. Conditional Clauses: External and Internal Syntax. *Mind & Language* 18(4): 317-339.

HAEGEMAN, Lilliane. 2004. The syntax of adverbial clauses and its consequences for topicalisation. In M. COENE, G. DE CUYPER and Y. D'HULST (eds.) *Antwerp Papers in Linguistics* - Current Studies in Comparative Romance Linguistics 107 Antwerp: University of Antwerp, 61-90.

HASPELMATH, Martin, Matthew S. DRYER, David GIL and Bernard COMRIE (eds.) 2005. *World atlas of language structures*. Oxford: Oxford University Press. http://wals.info/.

HASPELMATH, Martin. 2007. Coordination. In Tim SHOPEN (ed.) *Language Typology and Syntactic Description. Volume II: Complex Constructions*. Cambridge: Cambridge University Press, 1-51.

LABOV, William. 1966. *The social stratification of English in New York City*. Washington: Center for Applied Linguistics.

LABOV, William. 1994. *Principles of linguistic change: internal factors*. Oxford: Blackwell.

LABOV, William. 2000. *Principles of linguistic change: external factors*. Oxford: Blackwell.

LEDGEWAY, Adam. 2007. Diachrony and Finiteness: Subordination in the Dialects of Southern Italy. In Irina NIKOLAEVA (ed.) *Finiteness: Theoretical and Empirical Foundations*. Oxford: Oxford University Press, 335-65.

LOBO, Maria. 2003. *Aspectos da Sintaxe das Orações Subordinadas Adverbiais do Português*. PhD Dissertation. Universidade Nova de Lisboa.

LOHNSTEIN, Horst. 2004. Variable und invariante Strukturmerkmale von Satzkonnektoren. In H. BLÜHDORN, E. BREINDL and U. WASSNER (eds.) *Brücken schlagen – Grundlagen der Konnektorensemantik.* Berlin, New York: de Gruyter, 137-160.

MARTINS, Ana Maria, Sandra PEREIRA and Clara PINTO. forthcoming. The diachronic path of *senão*: from conditional subordination to exceptive coordination. In B. EGEDI and V. HEGEDŰS (eds.) *Selected Papers from DIGS 2014*. Oxford University Press.

MCDANIEL, Dana and Helen Smith CAIRNS. 1990a. The child as informant: Eliciting linguistic judgments from young children. *Journal of Psycholinguistic Research* 19(5): 331 - 344.

MCDANIEL, Dana and Helen Smith CAIRNS. 1990b. The processing and acquisition of control structures by young children. In L. FRAZIER and J. de VILLIERS (eds.) *Language Processing and Language Acquisition*. Dordrecht: Kluwer.

NOORDMAN, Leo G. M. and Femke BLIJZER. 2000. On the processing of causal relations. In E. COUPER-KUHLEN and B. KORTMANN (eds.) *Cause, Condition, Concession and Contrast. Cognitive and Discourse Perspectives.* Berlin/ New York: Mouton de Gruyter, 35-56.

PASCH, Renate. 1997. *Weil* mit Hauptsatz - Kuckucksei im *denn*-Nest. *Deutsche Sprache* 25(3): 252-271.

PEREIRA, Sandra, Clara PINTO and Fernanda PRATAS. 2014. Construções comparativas em português: porque algumas são mais iguais que outras. *Textos Selecionados do XXIX Encontro da Associação Portuguesa de Linguística*. Lisboa: APL, 437-444.

POLLARD, Carl and Ivan SAG. 1994. *Head-driven Phrase structure Grammar*. Chicago: University of Chicago Press.

QUIRK, Randolph, Sidney GREENBAUM, Geoffrey LEECH and Jan SVARTNIK. 1985. *A comprehensive grammar of the English language.* 3rd edition. London and New York: Longman.

vanVERSTRAETE, Jean-Christoph. 2007. The many faces of subordination, in Germanic and beyond. In Matti MIESTAMO and Bernhard WÄLCHLI (eds.) *New Challenges in Typology. Broadening the Horizons and Redefining the Foundations.* Berlin/New York: Mouton de Gruyter, 363-383.

ESTABLISHING CAUSAL RELATIONS IN EUROPEAN PORTUGUESE: COORDINATION AND SUBORDINATION IN A STRATIFIED CORPUS

JOANA AGUIAR AND PILAR BARBOSA

1. Introduction

The rigid boundaries of coordinate and subordinate clauses in Portuguese have been a topic of discussion in the last decades (Lobo 2003; Lopes 2004; Peres and Mascarenhas 2006; Mendes 2013). Notwithstanding this, few studies have examined the frequency of occurrence of different mechanisms of clausal connection in written or oral corpora in interaction with the influence of social variables, such as age or level of education.

In this article, we focus on the syntactic structures used to convey causal relations between clauses in a stratified written corpus, collected following variationist principles (Weinreich, Labov and Herzog 1968). The different structures used – juxtaposition, supplementation, coordination and subordination – are analysed according to the type of causal relation expressed and the age, gender and level of education of the informant. Our goal is to contribute to the discussion of the mechanisms of clausal connection, presenting new data from a stratified written corpus.

2. Coordination and subordination

Coordination can be classified as a mechanism that establishes the connection of two constituents without creating structural dependency. Coordination of clauses is only possible if the members connected have the same syntactic status, i.e., if they have categorical symmetry (Carston and Blakemore 2005).

Consider the following example of clausal coordination:

(1) *O João seleciona os informantes e   a Maria grava as entrevistas.*
     the John selects   the informants and the Mary records the interviews
     'John selects the informants and Mary records the interviews.'

In (1) the coordinating conjunction *e* 'and' establishes a non-hierarchical syntactic connection with two independent clauses. None of the clauses integrates the other or syntactically depends on it. Also, the terms connected may be reversed without changing the meaning (2).

(2) *A Maria grava as entrevistas e   o   João seleciona os informantes.*
     the Mary records the interviews and the John selects   the informants
     'Mary records the interviews and John selects the informants.'

Coordinate clauses (3) may establish causal relations:

(3) *O   João não viu o   chão molhado e   escorregou.*
     the John not saw the floor wet   and slipped
     'John didn't notice the wet floor and slipped'

In (3) the interchangeability of the terms connected is not possible. This is so because, in this case, the semantic relation established between the terms conjoined is asymmetric (Blühdorn 2008). For this reason, this type of structure is also known as *asymmetric coordination* (Ross 1967), and as *subordinate at the conceptual level* (Culicover and Jackendoff 1997).

Subordination can be described as a mechanism that establishes an asymmetric dependency relation between constituents (Carston and Blakemore 2005) so that the subordinate clause plays a particular function within the clause that contains it (the matrix). Thus, in (4) below, the subordinate clause is an argument of the matrix predicate; in (5), the subordinate clause is a modifier.

(4) *O João espera* [*que a seleção   dos   informantes não seja demorada*].
     the John waits   that the selection of.the informants not be   long
     'John hopes that the selection of the informants will not take long.'

(5) *A Maria foi entrevistada* [*porque é bilingue*].
     the Mary was interviewed   because is bilingual
     'Mary was interviewed because she is bilingual.'

Taking into consideration the examples above, we can distinguish two major subclasses of subordinate clauses: those that function as arguments of the matrix predicate (labelled *bound* subordinate clauses in Peres and Mascarenhas (2006)) and those that are modifiers of the situation

described in the matrix clause, also described by Peres and Mascarenhas (2006) as *free*. Since bound subordinate clauses are not used to convey causal relations, they will not be further mentioned in this paper.

3. Distinguishing clausal coordination and (adverbial) subordination

The distinction between coordination and subordination, and their boundaries, are thoroughly debated in European Portuguese (Lobo 2003, 2013; Lopes 2004; Peres and Mascarenhas 2006; Silvano 2010). A number of tests have been used to distinguish the two: flexibility in the position of the clause within the sentence, clitic placement, embedding under coordination, and the behaviour of connectives. Due to space restrictions, we will only focus on the first of these tests.[1]

Overall, subordinate clauses exhibit flexibility in the position they occupy in the sentence:

(6) a. *Se fizeres os trabalhos de casa, podes ir jogar futebol.*
    if do   the works of home, may go play football
    'If you do your homework, you may go play football.'
  b. *Podes ir jogar futebol se fizeres os trabalhos de casa.*
    may go play football if do   the works of home
    'You may go play football if you do your homework.'

In contrast, coordinate clauses have a rigid position in the sentence:

(7) a. *O João joga futebol, mas nunca marca golos.*
    the John plays football, but never scores goals
    'John plays football, but never scores.'
  b.*Mas nunca marca golos, o João joga futebol.*
    but never scores goals, the John plays football
    *'But never scores, John plays football.'

4. Subclasses of adverbial clauses

Scope and focus phenomena (Haegeman 2004) provide evidence in support of a further subdivision within adverbial clauses, namely the distinction between central adverbial clauses (8) and peripheral adverbial

---

[1] For a complete description of the differences of these two classes of connections, please consider the above-mentioned references.

clauses (9). This taxonomy reflects the degree of integration of these clauses in sentence structure.

(8) *O   João não come amêndoas porque é alérgico.*
   the John not eat   almonds   because is allergic
   'John doesn't eat almonds because he is allergic to them.'

(9) *O   João não almoçou, visto que a   cozinha está limpa.*
   the John not had.lunch, seen that the kitchen is   clean.
   'John didn't have lunch, since the kitchen is clean.'

The two classes of adverbial clauses yield different results when inserted under a cleft structure:

(10) *É porque é alérgico que o   João não come amêndoas.*
    is because is allergic that the John not eats   almonds.
    'It is because he is allergic that John does not eat almonds.'

(11) **É visto que a   cozinha está limpa que o   João não almoçou.*
    is seen that the kitchen is   clean that the John not had.lunch
    *'It is since the kitchen is clean, that John didn't have lunch.'

Insertion of the adverbial clause *porque é alérgico* in a cleft structure generates a well-formed sentence (cf.10). The adverbial clause *visto que a cozinha está limpa*, by contrast, cannot be clefted (cf. 11). This restriction supports the view that the latter is integrated higher in the structure than the former. More specifically, central adverbial clauses are integrated at the TP level, whereas peripheral adverbial clauses are integrated at the CP level (Haegeman, 2004).

5. Explicative clauses: arguments for the classification as supplements

The assumption that coordination and subordination are homogeneous groups, and that all syntactic structures introduced by a connective fit in these groups, is too simplistic (Peres and Mascarenhas 2006; Mendes 2013). More specifically, in European Portuguese, the taxonomy of the clauses introduced by *pois, que* and explicative *because* is debatable. In fact, these structures were in the past classified either as coordinate (Brito 2003; Lobo 2003) or as subordinate (Matos 2004). Furthermore, Lopes (2004) classifies *pois*-clauses as paratactic and *que*-clauses as hybrid constructions. More recently, the taxonomies proposed by Peres and

Mascarenhas (2006), Mendes (2013) and Lobo (2013) classify the structures headed by *pois, que* and explicative *porque* as supplements. This classification is based on the fact that these structures exhibit a particular syntactic behaviour. On the one hand, just like subordinators (cf. 18), the connectives under discussion do not connect non-clausal constituents (cf. 13).

(12) *O   João comprou dez livros, se dois dicionários.
     the John bought   ten books, if two dictionaries
    *'John bought ten books, if two dictionaries.'

(13) *O   João comprou dez livros, pois dois dicionários.
     the John bought   ten books, for two dictionaries
    *'John bought ten books, for two dictionaries.'

On the other hand, like coordinators (14), explicative connectives reject the position in the beginning of the sentence (15):

(14) a. *Ele está a trabalhar sobre as apositivas e   requisitou todos os*
      he is to work   on   the appositives and requested all   the
     livros sobre o   tema.
     books on   the topic
     'He is working on appositives and requested all the books on the topic.'
    b.*E   requisitou todos os livros sobre o tema, ele está a trabalhar*
     and requested all   the books on   the topic, he is   to work
     sobre as apositivas.
     on   the appositives
    *'And requested all the books on the topic, he is working on appositives.'

(15) a. *Ele deve estar a trabalhar sobre as apositivas, pois requisitou todos*
      he must be to work   on   the appositives, for requested all
     os livros sobre o   tema.
     the books on   the topic
     'He must be working on appositives, for he requested all the books on the topic.'
    b.*Pois requisitou todos os livros sobre o   tema, ele deve estar a*
     for requested all   the books on   the topic, he must be   to
     trabalhar sobre as apositivas.
     work   on   the appositives
    *'For he requested all the books on the topic, he must be working on appositives.'

Considering this dual behaviour, the classification of explicative clauses either as subclasses of coordination or as subclasses of subordination is problematic. In fact, one characteristic that leads explicative clauses away from either subordination or coordination is the fact that explicative clauses resist being inserted under the scope of negation. Consider the following example:

(16) *Não é verdade que a   Maria foi a   melhor aluna   porque*
not is truth   that the Mary was the best   student because
estudou mais que os outros.
studied more than the others
'It is not true that Mary was the best student because she studied harder than the others.'

In (16), the subordinate clause *porque estudou mais dos que os outros* 'because she studied more than the others' may be interpreted under the scope of negation so that what is being denied is that Mary was the best student because she studied harder than her colleagues. This interpretation is much harder to obtain with an explicative clause introduced by *pois*:

(17) # *Não é verdade que a   Maria foi a   melhor aluna, pois estudou*
not is truth   that the Mary was the best   student, for studied
mais que os outros.
more than the others
'It is not true that Mary was the best student, for she studied more than the others.'

Coordinate clauses pattern with subordinate clauses in this respect. In (18) below, the adversative clause can be interpreted as being contained under the complement of the matrix verb:

(18) *Não é verdade* [*que a   Maria foi a   melhor aluna   a sintaxe, mas*
not is truth   that the Mary was the best   student at syntax, but
reprovou a   morfologia].
failed   at morphology
'It is not true that Mary was the best student at syntax, but failed at Morphology.'

In this respect, peripheral adverbial clauses seem to behave like explicative clauses (19) (Peres and Mascarenhas 2006 have, in fact, classified them as supplements for this reason).[2]

> (19) *#/?? Não é verdade que a   Maria foi a   melhor aluna*, *visto que*
>   not is truth   that the Mary was the best   student, seen that
>   *estudou mais que os outros*.
>   studied more than the others
>   'It is not true that Mary was the best student, given that she studied
>   more than the others.'

Nonetheless, peripheral subordinate clauses (20) may be moved to the position between a subordinate complement clause and the structure in which this is integrated, as opposed to explicative clauses (21).

> (20) *O   João disse que, visto que a   palestra era à   noite, o jantar*
>   the John said that, seen that the lecture   was at.the night, the dinner
>   *era pago pela   universidade*.
>   was paid by.the university
>   'John said that, since the lecture was at night, the dinner was paid by the
>   university.'

> (21) * *O   João disse que, pois a   palestra era à   noite, o   jantar era*
>   the John said that, for the lecture was at.the night, the dinner was
>   *pago pela   universidade*.
>   paid by.the university
>   *'John said that, for the lecture was at night, the dinner was paid by the
>   University.'

In view of these facts, we classify explicative clauses introduced by *pois*, *que* and (explicative) *porque* as supplements.

To summarize, in European Portuguese, we may distinguish three major classes of connections: subordination (peripheral and non-peripheral), coordination and supplementation.

6. Causal Relations

The establishment of causal relations is central to human cognition (Noordman & Blijzer 2000; Meyer 2000; Sanders and Spooren 2009). Thus, the notion of causality is always present, whether implicitly or explicitly, in

---

[2] In this case, judgements are shakier. Some speakers do allow for the clause introduced by *visto que* 'given that' to fall under the scope of negation.

human communication (Paiva 1996; Sanders and Stukker 2012). From the linguistic point of view, causal relations have been studied under several theoretical approaches: some more focused on the cognitive aspects of causal relations and their role in the construction of textual coherence (Mann and Thompson 1986, among others; Sanders *et al.* 1992, among others); and others more focused on the semantic and pragmatic aspects of the relation between two propositions or units of information (Santos Río 1981, among others; Asher and Lascarides 2003; Lopes 2004).

In this paper, we will use the tripartite division proposed by Sweetser (1990), according to whom causal relations can be divided into: real cause, epistemic cause, and speech act modifier cause.

Consider the following examples:

(22) A *O   João partiu a   perna* B *porque caiu das   escadas.*
        the John broke the leg   because fell from.the stairs
        'John broke his leg because he fell from the stairs.'

(23) A *O   João não almoçou,   * B *pois a   cozinha está limpa.*
        the John not had.lunch,   for the kitchen is   clean
        'John didn't have lunch, for the kitchen is clean.'

(24) A *Vai almoçar,* B *que retomamos os trabalhos às   13h.*
        go lunch,   as restart   the works   at.the 13h
        'Go lunch, as we restart working at 1 p.m.'

In example (22), the fact that John fell from the stairs is presented as the (real) cause for the fact that he broke his leg. In other words, it was because he fell from the stairs that he broke his leg (and not for any other reason). The causal relation between the information conveyed in A and the information conveyed in B is asserted, and there is no hidden presupposition between A and B.

On the other hand, in example (23) the causal relation between the information in A (John didn't have lunch) and the information in B (the kitchen is clean) is presupposed (Lopes, 2004). In this case, there is an inference from B that A happened. The establishment of a (explicative) cause is only possible because there is a hidden premise (Lopes 2009) that is activated in order to establish the causal relation: according to the knowledge that the person has of the world, normally when John has lunch, he leaves the kitchen dirty. Therefore, if the kitchen is clean, I deduce that probably John didn't have lunch.

The third type of causality, the speech act modifier, is illustrated in (24). Similar to the explicative cause relation, the establishment of a causal relation between the information conveyed in A and B is presupposed. What

distinguishes this type of causal relations from explicative causality is the fact that speech act modifiers have a specific function of meta-justification (Sweetser, 1990). For that reason, speech act modifiers are normally preceded by direct speech acts, such as orders or requests. In the specific case of example (24), the structure in 'as we start working at 1p.m' functions as a downtoner of the order 'go lunch'. In other cases, the speech act modifier impels to action and to decision taking, as example (25) illustrates:

(25) A*Vai estudar*, B *porque amanhã   tens teste*.
  go study,   because tomorrow have test
  'Go study, because tomorrow you have test.'

7. Methodology

The present study follows the methodology proposed by the Variationist Sociolinguistics (Labov 1994, 2000), according to which variation can be explained by the interaction of linguistic (or internal) variables and social variables. More specifically, in the case of causal relations (real, explicative, speech act modifier), the internal variables considered for analysis were: type of syntactic structure, type of connective, and position of the clause (for adverbial clauses only). The social variables considered were: gender, level of education, and age of the speaker.

The following subsections deepen the methodological choices taken.

7.1. The corpus of analysis

In order to analyse the frequency of occurrence of causal relations (and their syntactic representation), it was necessary to collect a stratified corpus of written texts.

The collected *corpus* is composed of 168 argumentative texts, 120 of which were written on demand (cf. Table 1) and 48 collected in blogs (Table 2). The authors of the texts are European Portuguese native speakers and each informant wrote two different texts. The sample is stratified according to three social variables: gender, level of education and age of the informant (Table 1 and Table 2).

Argumentative Texts (written upon request)																			
Education level	ongoing								completed											
	4th grade		6th grade		9th grade		11th-12th grade		9th grade				11th-12th grade				BA/MA			
Age Interval	< 10		10-12		13-15		16-19		20-45		> 45		20-45		> 45		20-45		> 45	
Gender	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M
No Inf.	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Table 1. Argumentative texts: relation of informants according to the social variables.

Texts collected from blog entries								
Education level	11th-12th grade				BA/MA			
Age Interval	20-45		> 45		20-45		> 45	
Gender	F	M	F	M	F	M	F	M
No Inf.	3	3	3	3	3	3	3	3

Table 2. Texts collected from blog entries: relation of informants according to the social variables.

In order to balance the sample of texts under analysis, each informant wrote two texts. Also, the themes and the number of words per text were controlled. In this respect, some studies (Tannen 1990; Herring and Paolillo 2006; among many others) indicate that texts written by women tend to be mainly about relations and feelings whereas texts written by men are mainly about objects, politics or technology. To overcome this possible bias, it was necessary to restrict the themes that the informants wrote about. In the case of the argumentative texts written upon request, the informants had to select two topics to develop from the following themes: school regulations, government decisions, justice and laws, education and health. Each theme was introduced with a news extract. In the case of the blog entries, the selection of texts was based on the themes already defined.