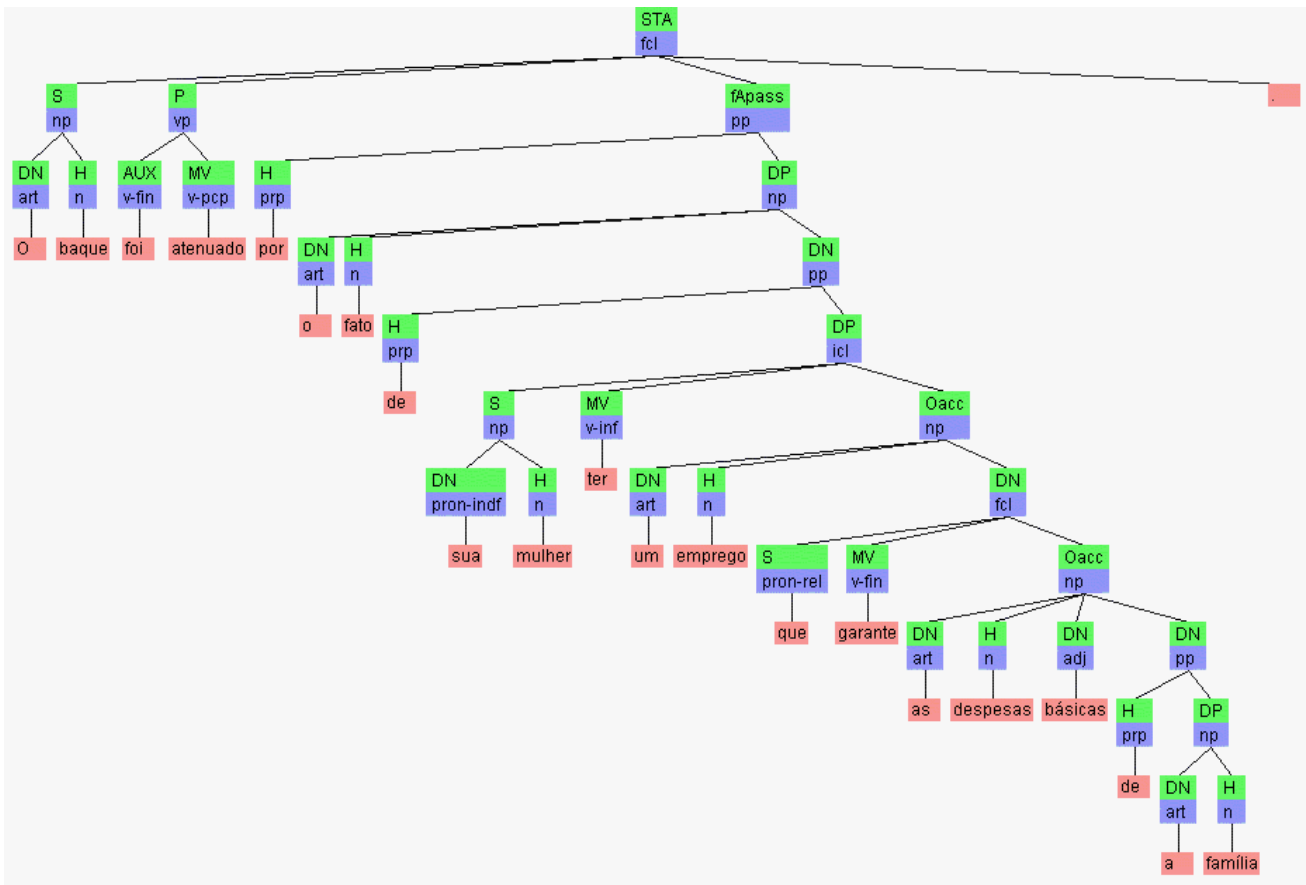


Eckhard Bick

PORTUGUESE SYNTAX



Teaching manual

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1. Introduction: Grammatical conventions 5

1.1. *The flat classical model: word function, no form* 6

1.2. *Pure Dependency Grammar: word chains (syntactic form), no function* 6

1.3. *Pure Constituent Grammar: hierarchical word grouping (syntactic form), no function* 7

1.4. *Adding function* 8

1.4.1. *Dependency Grammar with function labels* 8

1.4.2. *Constraint Grammar* 8

1.4.3. *Enriched Constituent Grammar* 9

2. Building trees: The notion of constituent 11

3. Clause level functions 14

3.1. *Clause level arguments (valency governed)* 14

3.2. *Clause level adjuncts (not valency governed)* 18

3.3. *Syntactic function vs. semantic function* 25

4. Subordination 29

5. The function of verbal constituents 34

6. Group forms and group level constituent function 38

6.1. *Noun phrases (np)* 40

6.2. *Ad-word phrases (ap)* 47

6.3. *Prepositional phrases (pp)* 51

6.4. *Pronoun phrases* 56

7. Clause types 59

7.1. *Finite subclauses* 62

7.1.1. *Nominal finite subclauses* 62

7.1.2. *Attributive finite subclauses* 63

7.1.3. *Adverbial finite subclauses* 63

7.2. *Non-finite subclauses* 64

7.2.1. *Infinitive subclauses* 64

7.2.2. *Gerund subclauses* 65

7.2.3. *Participle subclauses* 68

7.2.3.1. *Attributive participles* 68

7.2.3.2. *Participles in verb chains* 69

7.2.3.3. *Ablativus absolutus* 70

7.3. *Averbal subclauses* 73

7.4. *ACI and causatives* 76

8. Co-ordination 82

9. Comparatives 89

10. Utterance function 97

11. Topic and focus constructions 99

Appendiks 1: Word classes (morphological form) 107

Alphabetical index 109

This text is meant to fulfill a double function: First of all, it has been written as an introductory course in Portuguese Syntax for university students, but it can also be seen as a kind of manual for the Portuguese section of the interactive grammar teaching tools provided by the VISL project at Odense University (<http://visl.hum.ou.dk>). Most sentences and analyses discussed in this text have thus been made available as interactive syntactic trees on the internet. Moreover, the parsing tools at the VISL site allow the user to work with changed sentences, as well as enter completely new sentences for automatic analysis, or even running text copied from on-line newspapers. Analyses can be performed at different levels (morphology, syntax, semantics), and within different grammatical frameworks (Constraint Grammar, Constituent Tree Grammar). Also, at the VISL site, users have access to a Portuguese-Danish and Danish-Portuguese electronic lexicon, word-for-word automatic translation and running text translation.

1. Introduction: Grammatical conventions

Within grammar, syntax deals with the *linear structure* of language, trying to explain how *words* (the minimal units of syntax) interact in forming a *sentence* (the maximal unit of syntax). In our approach, special attention will be paid to the *form and function* of syntactic units. Individual words as well as more complex structural parts of a sentence (groups and clauses) can all be described in terms of form and function.

Words and sentences

A simple definition of a word - especially useful for written language – states that words are alphanumeric strings delimited by blank spaces or punctuation in a text. This includes multi-word abbreviations like "PTB" or "DNA", and from a more pragmatic point of view (to be taken in this book), complex lexical units like "Estados Unidos", "em vez de", "anti-gás" may also qualify as "words".

With the same logic one can define a sentence¹ as text delimited by a full stop, question mark or exclamation mark, or – syntactically – any functionally coherent chain of words, including one-word utterances like "venha!" and verbless statements like "ai, pobre de mim!".

Form and function

Different grammatical approaches describe sentences in different ways, focussing on different aspects of syntactic form and function.

Morphologically, *form* is the way in which words are composed and inflected - the basic unit being a morpheme - while morphological *function* deals with a given morphemes function within the word. The word 'comamos', for instance, can morphologically be analysed as the morpheme-string 'com(1)-a(2)-mos(3)', where (1) is the word's lemmatic root, (2) a subjunctive vowel marker, and (3) the 1.person plural ending, while tense is not explicitated (present tense as zero morpheme). Words can be assigned morphological word classes according to which categories of inflection or derivation they allow. Thus, 'comemos' is a verb, because it features mode (subjunctive), tense (present), person (1.) and number (plural).

Syntactically, *form* is the way in which a sentence is structured, i.e. how its words are chained, ordered and grouped. Syntactic *function*, then, is how words or groups of words function in relation to each other or to the sentence as a whole. Words can be assigned syntactic word classes according to which categories of syntactic form or function they allow. Prepositions, for example, are usually defined not morphologically, but by syntactic form, i.e. as "headers" for noun groups or infinitives.

Syntactic models

Three basic types of syntactic models will be discussed in the following, on the one hand the classical functional model, on the other hand the form based approaches

¹ The concept of 'sentence' must not be confused with that of 'clause' (to be introduced in chapter 2). As understood here, the term sentence denotes the maximal window of syntactic analysis, while a clause is a multi-word syntactic unit with at least one predicator or subordinator.

of dependency and constituent grammar which in their pure form both leave function implicit. Next, we will discuss how different models can be integrated so as to cover both form and function, as is the case when function labels are added to a dependency or constituent diagram, or when dependency markers are attached to function labels as in the word based Constraint Grammar model.

1.1.

The flat classical model: word function, no form

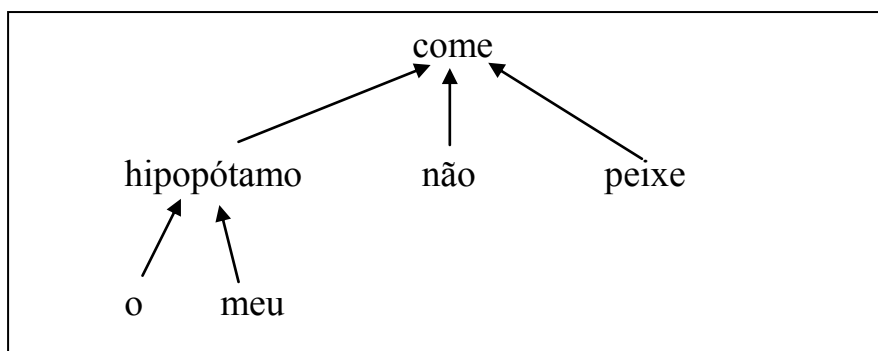
O meu hipopótamo não come peixe.
 S A V O

This is the system taught in Danish primary schools, albeit with symbols ("kryds og bolle") instead of letters. The system allows ordinary running text, and yields a simple structure, which is psychologically easy to grasp, since function markers are attached to the semantically "heavy" words in the sentence, rather than to *groups* of words (it is 'hipopótamo' that receives the subject tag, not 'o meu hipopótamo').

1.2.

Pure Dependency Grammar: word chains (syntactic form), no function

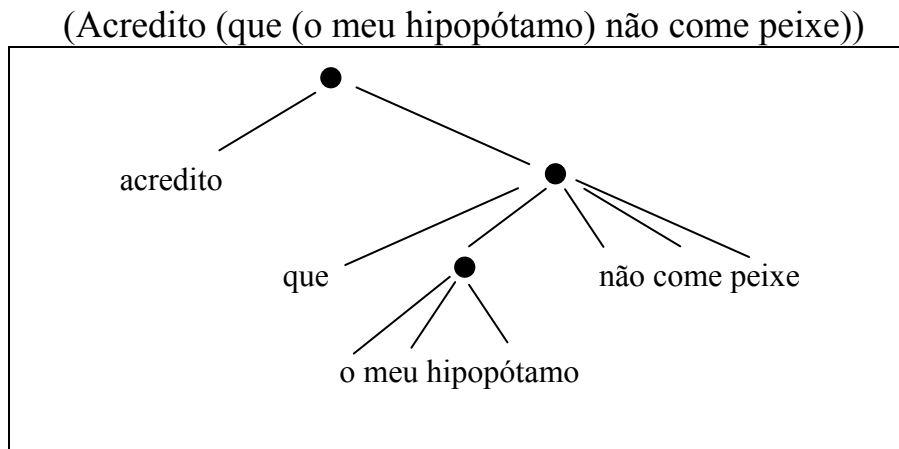
In Dependency Grammar every word is attached to another word, its *head*, of which it is a *dependent*. A word can have more than one dependent, but only one head. The finite verb roles as pivot of the sentence, being its uppermost *node*.



Dependency Grammar does not use word-less nodes or zero (empty) constituents, and its strictly word-based analysis has the pedagogical advantage of not having to "see" larger units before constituent relations can be established. Rather, constituents grow larger as the analysis progresses. Thus, it doesn't matter whether 'meu' is attached to 'hipopótamo' before or after 'hipopótamo' is attached to 'come'.

In dependency grammar, syntactic function is expressed indirectly as the asymmetrical relation between heads and dependents.

1.3.

Pure Constituent Grammar:**Hierarchical word grouping (syntactic form), no function**

Conceptually, Constituent Grammar works "top-down", - a sentence is split into (maximal) constituents, and those constituents that are not words but groups of words, are marked by a "non-terminal" (i.e. word-less) node on that level (small circles in the illustration), and are further split into a new generation of (maximal) constituents, on the next lower level, - and so on, until terminal nodes (words) are reached throughout the whole tree.

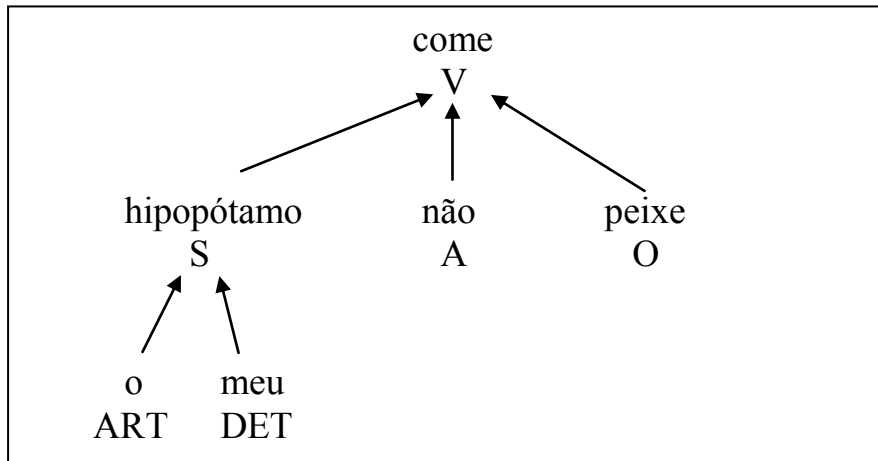
Constituent Grammar can be expressed by rewriting rules, where a certain type of non-terminal node can be rewritten as a sequence of non-terminals and terminals (words or word classes). Noun phrases, for instance, could be rewritten as a chain of optional articles, pronouns and adjectives followed by a noun. With a complete set of rewriting rules a generative constituent grammar seeks to define all and only of such word sequences that form sentences in a given language.

In constituent grammar, syntactic function is expressed indirectly as the way in which constituents can be combined into larger constituents (in English, for instance, a subject would be that np [noun phrase] which is left when you strip a clause of its vp [verb phrase]).

Usually none of the models described here are used in teaching in pure form. Hybrid models, where models make use of each other's terminology, are not uncommon. Thus, Constituent Grammar can be made to handle dependency relations, and both Dependency Grammar and Constituent Grammar can easily be enriched by functional information from the classical model.

1.4. Adding function

1.4.1. Dependency Grammar with function labels



In the example, 'hipopótamo' has not only been identified as head of 'o' and 'meu' and as dependent of 'come', but also as subject (S), while its dependents have been classified as article-modifier (ART) and determiner-modifier (DET), respectively.

1.4.2. Constraint Grammar

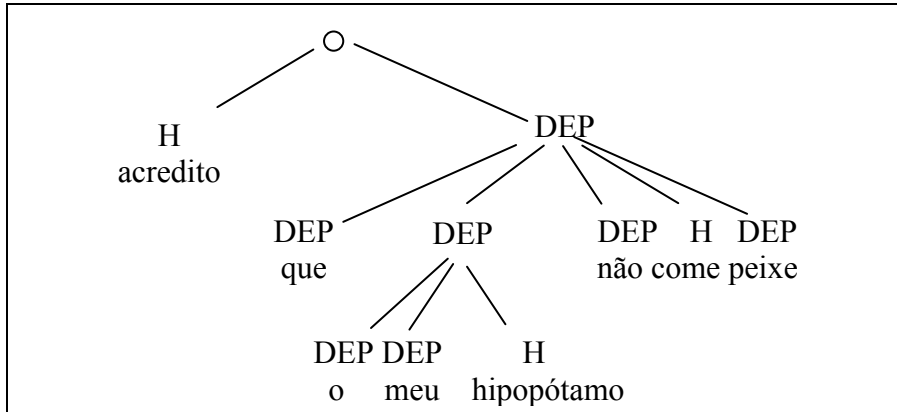
Constraint Grammar uses a flat dependency notation in combination with function labels, thus integrating the classical system of word based function. Directed open dependency markers (> = head to the right, < = head to the left) are attached to individual words, and combined with function symbols:

O	meu	hipopótamo	não	come	peixe
>N	>N	SUBJ>	ADVL>	MV	<ACC

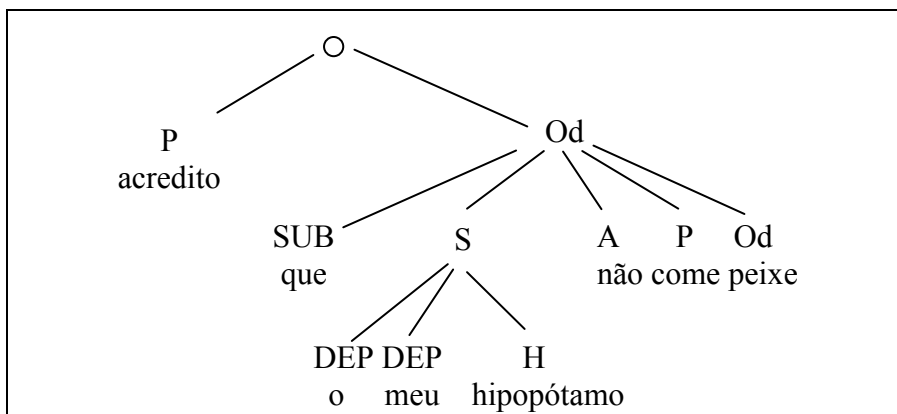
Note that in the system presented here, the only word not bearing a dependency marker is the main verb (MV), which functions as head for subject (SUBJ>), direct/accusative object (<ACC) and adverbial (ADVL>), whose dependency markers all point towards the verb. Within the noun phrase 'O meu hipopótamo', only the head points outward/upward, and it is the head that bears the group's function as a whole. 'o' and 'meu' attach as prenominal modifiers (>N) to a noun (N) to the right (>). Note that at the clause level the head is not specified at the dependency arrow head, since only one type of head is possible (V, a verb), while at the group level heads are specified (here: N for noun), while function is underspecified in the symbol, since at group level only one type of dependent is recognised (adject).

1.4.3. Enriched Constituent Grammar

Dependency grammar's different concept of syntactic form can be integrated into the constituent grammar notation, yielding a minimum of function:



As can be seen, of the constituents at any given level (with the exception of the top node), there is now always one (and only one) "primus inter pares", the groups head (H), degrading its other constituents into dependents (DEP). In the same fashion, function can be added. The English VISL system, for instance, is a hybrid model where function has been introduced at the clause level:

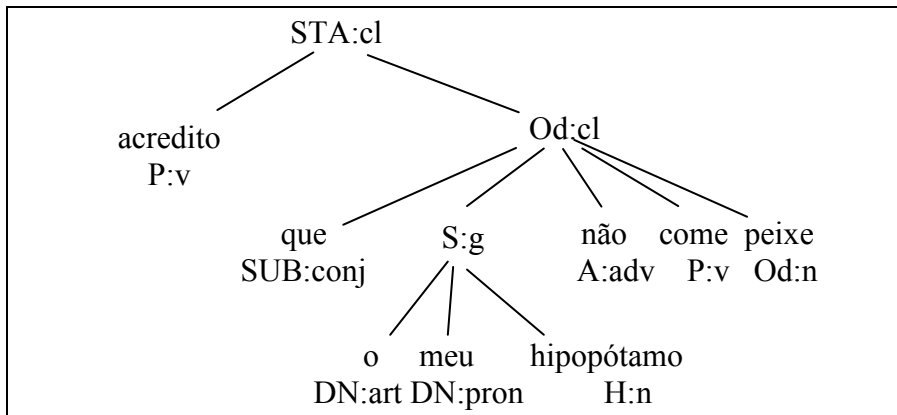


Also on the form side, both dependency and constituent models presented here can be enriched. Thus, apart from model-inherent information about syntactic form, one can, for instance, mark word nodes for (morphological) word class. Regarding non-terminal nodes in tree structures one can distinguish between groups and clauses, and subdivide these according to structure and typical head classes. A noun phrase (np) can thus both be defined (i) as a group with a noun as head, or (ii) as a group allowing articles, determiners or adjectives as inflecting modifiers.

Following VISL conventions, both form and function should be made explicit for every word or node (bracket), with function symbols in capitals and form symbols

in small letters, the two being separated by a colon (horizontal notation) or an underline (vertical notation).

Using the Portuguese symbol set, we get, for the above example, the following tree:

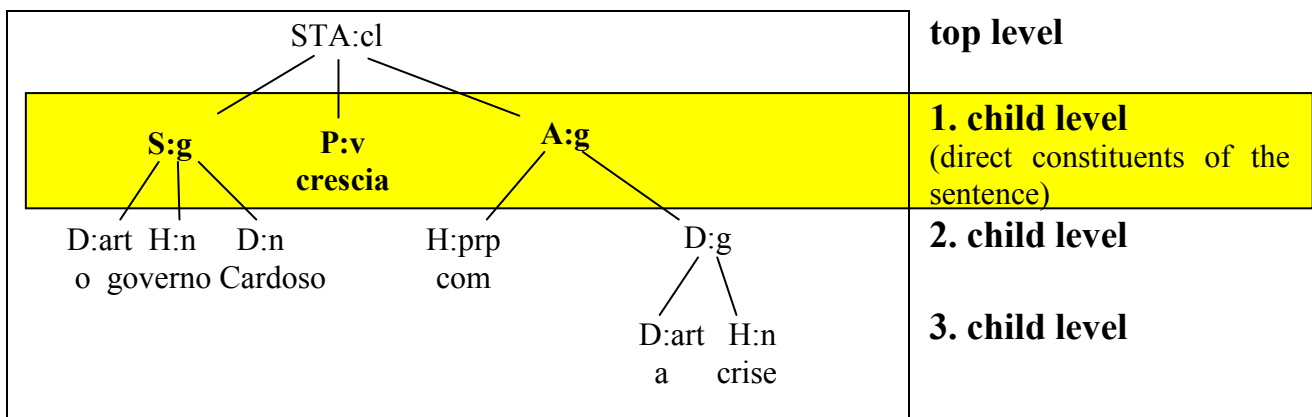


In Constraint Grammar's flat dependency notation, the same tree can be expressed as in-text information without bracketing, with group information subscripted at the group's head, and subclause information superscripted at the clause's first verb or complementizer:

Acredito_{MV:v} que_{SUB:conj}^{<ACC:fcl} o_{>N:art} meu_{>N:det} hipopótamo_{SUBJ:n} não_{ADVL>:adv} come_{MV:v}
peixe.

2. Building trees: The notion of constituent

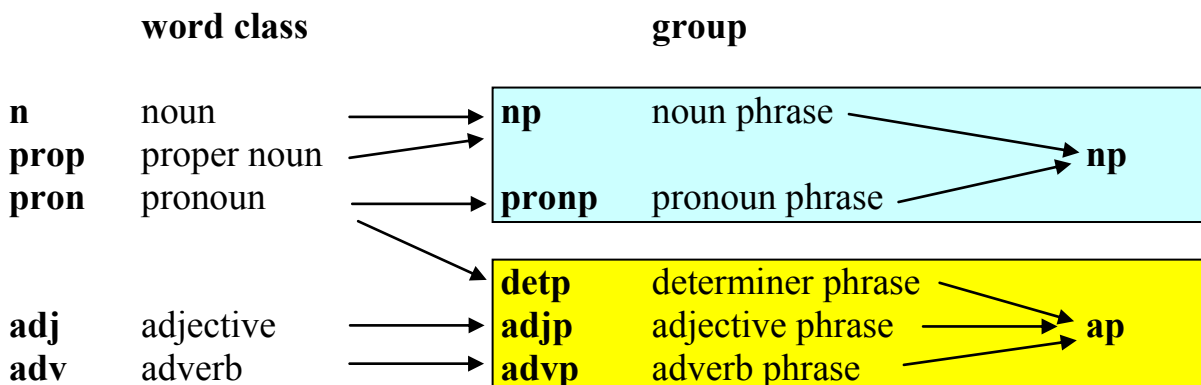
At a given level of analysis, we define as constituents of a syntactic unit those words or groups of words that function as immediate "children" of this syntactic unit. Every syntactic unit must itself be a constituent, the highest node being the sentence. In the sentence *O governo Cardoso cresce com a crise*, none of the nouns is a direct constituent ("child node") of the sentence. 'governo' is part of a noun phrase (np), which IS a constituent (subject) of the sentence, while 'crise' is placed even lower in the tree, being part of a noun phrase (np), which is part of a prepositional phrase (pp), which IS a constituent (adverbial) of the sentence.



With regard to **form**, constituents can be either single *words* ('cresce'), or *groups* ('o governo Cardoso', 'com a crise') and *clauses* ('que hipopótamo não come peixe'), both of which are complex units. With regard to **dependency relation**, constituents can be *heads* (H) or *dependents* (D), which is also the minimal functional distinction, often used for in-group constituents – where the number of different functions is very restricted, and predetermined by the type of group in question.

Word constituents are form-classified according to their morphosyntactic word class. *Groups* are classified according to their prototypical head material, i.e. noun phrase (np), prepositional phrase (pp), adverb phrase (advp) etc. The same holds for *clauses*, where the leading verb is regarded as head, if there is one, - yielding the categories finite (fcl) and non-finite clauses (icl). Clauses without verbs will here be called averbal clauses (acl). Averbals are headed by a subordinator.

In this book, we will be using the following word classes and group types:



num	numeral			
v	verb	—————>	vp	verb phrase
prp	preposition	—————>	pp	prepositional phrase
conj	conjunction			
in	interjection			

Though there are 7 word classes that can head groups, there are only 4 structurally distinct group types (np, ap, pp and – if acknowledged as such – vp), when one focuses not only on prototypical *head* material, but also on prototypical *dependent* material: groups allowing adjectives or pronouns as dependents fit the wider notion of **np**, while groups allowing adverb dependents will be denoted as **ap**'s. Vp's are here understood as chains of auxiliaries and a main verb, in Portuguese syntactically headed by the first verb in the chain, semantically by the main verb. If recognized, vp's replace the leading verb as head of the clause².

Like groups, *clauses* need at least two constituents, which can themselves be words, groups or clauses. The difference between groups and *clauses* is that clauses contain a constituent with verbal function (predicator) and/or a complementizer (subordinator), while groups don't.

With regard to **valency**., dependents can be classified as *argument*. or as *adjuncts* (clause level). and *modifiers* (group level). respectively, the difference being that arguments are valency bound by their head, while adjuncts and modifiers are not. Consider the following examples where arguments are in bold face, adjuncts and modifiers in italics.

- (i) nunca come **carne de boi** (direct object argument, clause level)
- (ii) de noite, passeava *ao longo do rio* (adjunct adverbial, clause level)
- (iii) iniciou uma guerra **contra a corrupção** (argument postnominal, group level)
- (iv) era um rei *sem país* (modifier postnominal, group level)

Arguments can either be obligatory (like the argument of a preposition) or optional (like the indirect "dative" object of the verb 'dar'). Consider the following examples (obligatory arguments in bold face, optional arguments in brackets, heads underlined):

- (a) sem **dizer nada** (argument of preposition, group level)
- (b) prometeram[-lhe] mais um presente (dative object, clause level)
- (c) na época do Titanic, ela era **muito bonita** (subject complement, clause level)
- (d) está **falando** com um cliente (complement of auxiliary, verb chain)
- (e) mora **numa favela** (argument adverbial, clause level)
- (f) o estado de Minas Gerais era muito rico [em ouro] (argument of adjective)

² In our constituent grammar definition, a vp is a purely "verbal" group that can constitute a predicator or even a sentence, but never - on its own - a whole clause. Valency dependents (subject, objects etc.) of the main verb are thus attached not at group level, but "higher up", at clause level.

Note that some functions can occur both valency bound and free, as is the case for adverbials and predicatives. Cp. chapter 3.2.

3. Clause level functions

3.1.

Clause level arguments (valency governed)

The functional pivot of most clauses is a verbal constituent (**V**), also called predicator (**P**). Complex verb chains can consist of both main verbs (**MV**) and auxiliaries (**AUX**), linked by a dependency relation, and possibly by an auxiliary subordinator (**SUBaux**). For the sake of simplicity, we will here stick to single verbs, and treat complex predicators in another chapter.

In Portuguese, there are four main types of clause level arguments, the subject (**S**), objects (**O**), argument adverbials (**A**) and complements (**C**). Objects are subclassified according to pronominal case, argument adverbials and complements as to whether they relate to the subject or – if present – to the direct object. In the examples, complex constituents are "united" by underlines.

Maria dormia.

S P

Trouxe um amigo. Gosta de vinho. Lhe ajuda.

P Oacc P Opiv Odat P

Viajará para Londres. Pôs a metralhadora na mesa.

P As P Oacc Ao

Parece louco. O elegeram presidente.

P Cs Oacc P Co

The different types of arguments in the examples can be distinguished by pronominal substitution:

S (subject) demands nominative case when pronominalized (eu, tu). The subject has person and number agreement with its clause's finite verb (or, possibly, leading infinitive).

Oacc (direct or accusative object) demands accusative case when pronominalized (o, a, os, as): "Trouxe-o". Both S and Oacc can be pronominalized with "o_que".

Opiv (prepositional object) is always a pp [prepositional phrase] and demands prepositional case (also called *oblique* or *prepositive*: mim, ti) when the argument of its preposition is substituted by a pronoun: "Gosta de ti." Adverbials can be pp's, too, but prepositional objects can be distinguished from argument adverbials (or adverbial objects, A) by the fact that they can't be replaced by adverbs, and from adjunct adverbials by the fact that they are valency bound (cp chapter 3.2).

Odat (pronominal dative object) is the function assigned to the pronominal form 'lhe'. Dative objects typically occur as optional number 2 object in the presence

of a number 1 direct object (Oacc): "Lhe (Odat) dá um presente (Oacc)." *Lhe* alternates with pp-objects introduced by the prepositions 'a' or 'para', which is why such pp's could be regarded as dative objects, too: "Dá um presente a ela (Odat)." The corresponding non-pronominalized construction is, however, (form wise!) indistinguishable from a prepositional object, and will here, for the sake of formal consistency, be tagged as such: "Lhe ajuda" (Odat) – "Ajuda a ele" (Opiv).

C (complements or predicatives) can be substituted by either "tal" or "isto", but normally not by personal pronouns: "Parece tal" (Cs), "O elegeram isto" (Co). Complements differ from objects in complementing *both* the clause's main verb *and* its subject (Cs) or direct object (Co). That's why they are called predicatives – like adnominal modifiers, they predicate something of a noun, while the clause's main verb is reduced to a kind of connecting device (called *copula* for the Cs-predicative) without much semantic content of its own. For focusing, Cs can be fronted, while Co can't (*rico [Cs] não é – *engraçado [Co] não o acho*). Adjectives and participles with predicative function have number and gender agreement with their nominal referent, Cs with the subject, Co with the object.

A (argument adverbials or adverbial objects) can be substituted by an adverbial pronoun: "Viajará lá." (As), "Pôs a metralhadora lá." (Ao). Like complements (C), some argument adverbials (A) can be distinguished with regard to subject or object connection (As and Ao). Place and direction adverbials, in particular, "feel" very "predicative": "Mora lá" (As or Cs?), "Colocou-o lá" (Ao or Co?)³, and the same is true of "Está bem" (As or Cs?). Still, in all three cases we will follow the adverb substitution test and settle for the adverbial function tag (A). A very special case are the measuring verbs *durar* [7 horas], *custar* [7 coroas] and *pesar* [7 gramas]. Superficially, the arguments of these verbs seem to ask for direct object function (Oacc), but both the accusative pronoun substitution test and the "o_que"-substitution test fail. Only substitution with "quanto"/"tanto" works, and in the framework of this grammar, we will opt for an A analysis (argument adverbial), adding "quanto" – at least where it doesn't alternate with "o_que" – to the short test list of adverbial interrogative pronouns ("onde", "quando", "como").

Each Portuguese verb has a fixed set of valency patterns. The examples given concern "maximal valency", including both obligatory and optional complements:

<vt>	monotransitive	S V Oacc	<i>comer ac., amar alg.</i>
<vd>	monotransitive	S V Odat	<i>obedecer, agradar, convir</i> (with dative pronouns: <i>lhe, me ..</i>)
<vp>	monotransitive	S V Opiv	<i>contar com, gostar de</i>
<va>	monotransitive	S V As	<i>durar TEMP, custar QUANT,</i> <i>morar LOC, ir DIR</i>
<vK>	copula	S V Cs	<i>estar, ser, parecer, chamar-se</i>
<vi>	intransitive inergative	S V	<i>trabalhar, nadar, dançar, correr</i>

³ As a matter of fact, some grammatical traditions do treat subject- or object-related adverbials as subject and object complements, respectively.

<ve>	intransitive ergative	V S	<i>desaparecer, chegar, desmaiar, cair, crescer, desmaiar, nascer</i>
<vdt>	ditransitive	S V Odat Oacc	<i>dar-lhe ac., mostrar, vender</i>
<vtp>	ditransitive	S V Oacc Opiv	<i>confundir ac. com, trocar por, transformar em, afastar de</i>
<vta>	ditransitive	S V Oacc Ao	<i>pôr ac. LOC, colocar ac. LOC, mandar alg./ac. DIR</i>
<vtK>	transobjective	S V Oacc Co	<i>achar alg./ac. OC, considerar</i>
<vU>	impersonal intransitive	V	<i>chover</i>
<vUt>	impersonal transitive	V Oacc	<i>haver ac./alg.</i>

Valency also concerns an argument's form, i.e. the word or group material that is allowed to fill the argument slot. Prototypically, subjects (S), direct objects (Oacc) and the argument of a prepositional object's preposition (Opiv) would ask for a noun, an np [noun phrase], or an independent pronoun, while prototypical adverbials (A) are adverbs. However, an adverbial argument can just as well take the form of a pp [prepositional phrase] (a) or even an np (b), if only it can be substituted by a regular adverb. Subjects can be infinitive-clauses (c), and direct objects of cognitive verbs can be finite subclauses (d-e). Predicatives (C) usually consist of adjectives, adjp's [adjective phrase] or np's, but in some cases, pp's do occur (f-g).

- (a) Vai **para Florianópolis**. (As:pp)
- (b) Durava **muito tempo**. (As:np)
- (c) **Nadarmos regularmente** seria bom para a nossa saúde. (S:icl)
- (d) Temia **que não o conseguisse**. (Oacc:fcl)
- (e) Quis saber **quando voltaria o professor**. (Oacc:fcl)
- (f) Está **com febre**. (Cs:pp)
- (g) O perigo a tornou **numa fera**. (Co:pp)

Exploiting these differences, by taking into account argument form (or even semantics), valency patterns could be expressed more specifically, adding so-called selection restrictions. In the case of cognitive verbs, for instance, transitivity could be expressed in the following way:

<vq>	cognitiv	S (human) V que-conj Oacc:fcl (finite subclause)
<v+interr>	cognitiv	S (human) V qu-word Oacc:fcl (interrogative subclause)

symbol	category	examples
S SUBJ	subject sujeito subjekt	Ninguém gosta de chuva. Retomar o controle foi difícil. No seu sonho, a cidade era toda de vidro. Seja quem for. Tem gente morrendo de fome no Brasil. Fugiram do zôo um hipopótamo e um crocodilo .
Oacc ACC	direct (accusative) object objeto direto (acusativo) direkte (akkusativ) objekt	Liga a luz! Para combater as doenças do inverno, coma vitaminas . Não tem onde morar . Sempre come um monte de folhas .
Odat DAT	dative object objeto indireto pronominal indirekte (dativ) objekt	Deu- lhe um presente. Empreste- me a sua caneta, por favor! Me mostre seu hipopótamo!
Opiv PIV	prepositional object objeto preposicional preæpositionsobjekt	Não me lembro dele . Falamos sobre a sua proposta . Gostava muito de passear ao longo do rio . Não sabe de nada . Pode contar comigo . Chamamos de objeto preposicional complementos indiretos não substituíveis por pronomes adverbiais.
Cs SC	subject complement predicativo do sujeito subjektsprædikativ	Está doente . Está com febre . A moça parece muito cansada . Nadava nua no mar. Andava zangado todo dia.
Co OC	object complement predicativo do objeto objektsprædikativ	O acho muito chato . Tê-lo feito de propósito o faz um delito .
As Ao ADV	argument adverbial complemento adverbial adverbialargument [can be substituted by adverbial pronoun, valency bound, unlike adjuncts]	Durava muito tempo . (As) A jarra caiu no chão . (As) Não mora mais aqui . Mora em São Paulo . (As) Voltamos ao nosso assunto . (As) Mandaram-nos para Londres . (Ao) Costuma custar mais de mil coroas . (As)

3.2.

Clause level adjuncts (not valency governed)

Adjuncts, while still being clause level *constituents*, differ from clause level *arguments* in that they aren't bound by verbal valency. We will mark adjuncts by a little 'f' (for 'free') in the function symbol. Two main types will be distinguished here, adjunct (or free) adverbials (fA) and adjunct (or free) predicatives (fC). Both functions (adverbial and predicative) also occur as arguments, i.e. argument adverbial (A) and argument predicative (or complement - C), respectively. Like their argument counterparts, all free predicatives and some free adverbials (especially place and direction adverbials) can be related not only to the verb, but at the same time to either subject (fCs, fAs) or object (fCo, fAo).

The difference between argument adverbials and adjunct adverbials, or between argument predicatives and adjunct predicatives⁴, can be tested by the *predicate isolation test*, where "fazer" or "acontecer" is used to substitute for the predicate (the verb plus its arguments). Adjuncts (in italics) *can* be isolated from the verb, while valency bound arguments (in bold face) cannot.

- (a) Mora **no Rio**. -- *O que faz no Rio? - Mora. (A)
- (b) Caiu **no chão**. -- *O que fez/aconteceu no chão? - Caiu. (A)
- (c) Trabalha *no Rio*. -- O que faz no Rio? – Trabalha. (fA)
- (d) Chegou **no país** *depois da guerra*. -- *O que fez/aconteceu no país? – Chegou depois da guerra. / O que fez/aconteceu depois da guerra? – Chegou no país. (A and fA)
- (e) Se tornou **rico**. -- *O que fez rico? -Se tornou. (Co)
- (f) Nadava *nua*. -- O que fez nua? – Nadava. (fCs)
- (g) O filhos cresceram **grandes e fortes**. – *O que fizeram grandes e fortes? – Cresceram. (Cs)

Another, straightforward, test is the (constituent) omission test, which tests whether a constituent is obligatory (g-h) or not (i-j):

- (h) Mora **sozinha** (Cs) / **no centro** (As). -- *Mora.
- (i) Acha-a **maravilhosa** (Co). -- *Acha-a.
- (j) Acariciava o cavalo **entre as orelhas**. (fAo) -- Acariciava o cavalo.
- (k) No filme "Titanic" (fA), o jovem artista retratou a heroína **nua** (fCo).
-- Retratou-la.

Since adjuncts are always optional, the test can be used to rule out adjunct function in favour of argument function (h-i). However, the inverse is not true if the test is negative, since valency bound arguments come both in obligatory and in optional form. *Cair* (b) and *crescer* (g) are examples of the latter, *morar* (a,h) and *tornar-se*

⁴ Another difference between C and fC is that *free* predicatives can't be pronominalized with "o_que". This test works fine for subject predicatives, but is somewhat shaky for object predicatives. In particular, Co's with pp form (if recognized as such) are not covered (*chamar de, tornar em*).

(e) of the former. Therefore, with optional constituents, the constituent omission test has to be supplemented by the predicate isolation test.

Note that there is a problem in using the predicate isolation test for fCo or fAo constituents (j-k), since their link to the direct object may be enough to ensure test failure, - with or without verbal valency. fAs and fCs pass the test since they are linked to the *subject* which is *outside* the predicate for non-ergative verbs. fAo and fCo don't pass, simply because they lack their Oacc link⁵. Therefore, the adverbial *subject* adjunct [fAs] in (l) may be detected and distinguished from the two argument adverbials in the same sentence, but not the adverbial *object* adjunct [fAo] in (m).

(l) Veio de Portugal (As) para Brasil (As) num navio inglês (fAs).

(m) Mandou a filha de Portugal (Ao) para Brasil (Ao) no barco do rei (fAo).

Still, the fAo reading for *no barco do rei* can be defended on the (less formal) grounds that this constituent is a circumstantial manner adverbial and as such is more loosely linked to the verb than the direction pp's *de Portugal* and *para Brasil*, which match the semantics of the "transitive movement" verb *mandar*.

For valency bound object complements, the semantic link between verb and argument is usually causativity: What the Co predicates about the Oacc, is only true by force of the verb, not in any independent way, as becomes clear from the translations of (n-p):

(n) Tornaram a cidade **num eldorado para traficantes** (Co). [... so it was an eldorado]

(o) Acho a proposta **ridícula** (Co). [... that it is ridiculous]

(p) No fim de semana, pintou a casa **de azul** (Co). [... such that it was blue]

(q) Bebe o chá **quente** (fCo)! [... while hot]

(r) Prefiro a sopa **forte** (fCo). [... if strong]

In (q-r), on the other hand, *quente* and *forte* are true (or conditioned as true) independently of *bebe* and *prefiro*, which is characteristic of *free* object complements (fCo).

Sometimes both adjunct and argument readings are possible after the same verb, suggesting two different readings:

(s1) *Ela surpreendeu-o com outra mulher.*

(s2) *Ele surpreendeu-a com um presente.*

In (s1), the pp is valency bound, and enters into a secondary nexus with the object.

⁵ For similar reasons, fCs's with ergative verbs only pass if tested with the non-ergative 'fazer', which in any case sounds more odd than 'acontecer' in the concerning question:

Morreu jovem (fCs).

*O que aconteceu jovem?

?O que fez jovem? - Morreu

in the sentence – calling for an entirely new category. Since vocative constituents are case marked in some languages (Latin), the symbol fCvoc can be coined in the same way as the function abbreviations Oacc, Odat etc., by appending a “case” tag in small letters to the general function label.

A very special form of constituent is the **agent of passive** constituent in a passive clause, which in the corresponding active sentence is considered subject. Agents of passive pp’s, then, appear to be a kind of “ex-subject”-argument. At first sight, they do not appear to pass the isolation test (for adjuncts):

Foi convidado **pelos sogros** (1) **pela primeira vez** (2).

- (1) - O que aconteceu pela primeira vez? – Foi convidado pelos sogros. (fA)
 (2) *- O que aconteceu pelos sogros? - Foi convidado. (ARGpass?)

The question is, however, whether we have applied the isolation test correctly. From a CG or dependency grammar point of view, the clause to test is *not* the whole sentence, but the participle clause ‘convidado pelos sogros pela primeira vez’, which functions as complement of auxiliary (AUX<, cp. chapter 5). Therefore, we should replace only the predicate of the AUX< subclause with a dummy (feito), and not try to include a higher level predicator (*foi*). The adapted test does, as it should, distinguish between fA (3) on the one hand, and arguments like Co (4) and Ao (5) on the other.

- (3) O **outro dia**, foi chamado um comunista. – O que foi o outro dia?
 (4) O outro dia, foi chamado **um comunista**. - *O que foi um comunista?
 (5) Os presentes foram postos **na mesa**. - *O que os presentes foram na mesa?

Now, (2) becomes acceptable, suggesting adjunct status for the agent of passive:

- (2’) - O que foi pelos sogros? – Foi convidado. (fApass⁸)

⁸ Another solution would be to retain the *function* of object, but assign the tag of *free prepositional object* (fOpiv), in analogy with the free (benefactive) dative tag (fOdat) which we suggested for ‘lhe contou tudo’ or ‘ontem me comprei um carro’.

symbol	category	examples
fA ADVL	adjunct adverbial adjunto adverbial adverbialadjunkt	Sempre comiam cedo. As crianças jogavam no parque. Feito o trabalho temos tempo para mais uma cerveja. Entraram na vila quando amanheceu. O outro dia (fA) fugiu do zôo (As) um hipopótamo.
fApass PASS	passive adjunct agent of passive adjunto do passivo passivadjunkt	Era o herói do dia e foi elogiado pelo chefe do jardim zoológico.
fC PRED	adjunct predicative (subject adjunct) adjunto predicativo prädikativadjunkt	Sempre nada nua. Cansado, se retirou.
fCsta S<	statement predicative (sentence apposition) aposto da oração sætningoprädikativ	Morreu o cachorro da velha, o que muito a entristece.
fCvoc VOK	vocative adjunct constituente vocativo vokativadjunkt	Me ajuda, Pedro!

Exercise: Identify clause level constituents!

1. Achei um livro interessante.
2. Este livro parece interessante.
3. Achei o livro bem interessante.
4. Achei o livro na última hora.
5. Achei o livro na mala.
6. O livro caiu.
7. O livro caiu no chão.
8. Elena nadava.
9. Elena nadava no mar.
10. Elena nadava nua.
11. Chove.
12. A tartaruga nada.
13. Chegou um cliente.
14. A criança bebe leite.
15. Deu-lhe um presente.
16. A sua namorada está grávida.
17. Encontrou o país transformado.
18. O Rio de Janeiro se tornou um palco de desgraças.

19. No domingo 6, 200000 hinduístas demoliram uma mesquita na cidade de Ayodhya, no norte da Índia.

20. Ela andava muito assustada ultimamente.

The following authentic sentences are quotes from the short story “No Retiro da Figueira” by Moacyr Sclia:

21. O lugar era maravilhoso.

22. Mário, o chefe dos guardas, me apresentou a alguns dos compradores.

23. Gostei deles.

24. E quase todos tinham se decidido pelo lugar por causa da segurança.

25. As casas eram sólidas e bonitas.

26. Vimos a majestosa figueira que dava nome ao condomínio.

27. A festa não agradou à minha mulher.

28. Quem nos recebeu naquela visita e na seguinte foi o chefe deles.

29. Todos os dias sabíamos de alguém roubado.

30. Tínhamos de procurar um lugar seguro.

31. Minha mulher ficou encantada com o Retiro da Figueira.

32. E eu acabava de ser promovido na firma.

33. Na minha firma, por exemplo, só eu o tinha recebido.

34. Mudamo-nos.

35. A vida lá era realmente um encanto.

36. Os guardas compareciam periodicamente à nossa casa para ver se estava tudo bem - sempre gentis, sempre sorridentes.

37. Uma manhã de domingo, muito cedo, soou a sirene de alarme.

38. O chefe dos guardas estava lá, ladeado por seus homens, todos armados de fuzis.

39. Fez-nos sentar, ofereceu café.

40. E quem vai cuidar das famílias de vocês?

41. Passávamos o tempo jogando cartas, passeando ou simplesmente não fazendo nada.

42. Alguns estavam até gostando.

43. Pode parecer presunção dizer isso agora, mas eu não estava gostando nada daquilo.

44. Corremos para lá.

45. Entrou no avião.

46. A porta se fechou, o avião decolou e sumiu.

3.3. Syntactic function vs. semantic function

In a more semantically oriented analysis, clause constituents can be assigned so-called case roles, as first proposed by Fillmore. The most common are:

AG	agent	sb who acts <i>As crianças (S) brincavam.</i> <i>Foi morto por um assassino (ARGpass).</i>
PAT (TH)	patient (theme)	sb or sth affected by an action <i>A princesa (S) caiu da torre.</i> <i>A princesa beijou a pequenina rã (Oacc).</i>
EXP	experiencer	sb experiencing a psychological state <i>O guarda (S) ouviu um grito.</i>
BEN	benefactive	sb or sth benefiting from an action <i>Lhe (Odat) deu um presente de Natal.</i>
INSTR	instrument	sth that functions as a means <i>A bala (S) rompeu o vidro.</i> <i>Foi ferido por sete balas (fApass).</i>
LOC	locative	place for action or event <i>Finalmente, encontrou a carta na mala (Ao).</i>
DIR	direction (goal)	goal of movement <i>Viajaram para Londres (Ao).</i>
SRC	source	source or point of departure of movement <i>Vem de família rica (As).</i>

As can be seen from the examples, a certain semantic role does not necessarily match the same syntactic function in different sentences. Subjects can be both agents, patients, experiencers and instruments, and arguments of passive can be both agents, experiencers and instruments (but not patients), depending on the semantic function of the subject in the active sister-clause.

In some cases, interferences between morpho-syntactic (form, inflection) and semantico-syntactic (case role) criteria have led grammarians to disagree on which function to assign certain constituents:

Opiv's tagged as Odat

Deu um presente de Natal à namorada (para a namorada).

In this sentence the benefactive (BEN) constituent is a prepositional group (pp), and thus looks morphologically like a prepositional object (Opiv). Substitutability with a dative pronoun, however, as well as the benefactive case role itself support a dative object analysis (Odat).

*Não ama mais **a mim**..*

*O homem **a quem** amava desapareceu na guerra.*

In both sentences, the patient (PAT) constituent in bold face is a prepositional group (pp), but would by most analysts be regarded not as an Opiv, but as a direct object (Oacc). Substitutability with an accusative pronoun supports this analysis, as does the valency class (monotransitive) of the verb ‘amar’.

Reflexive Oacc’s tagged as S

Consider the following, very divergent, examples of the function of the Portuguese reflexive pronoun *se* :

- (a) *Com a lua subindo no céu, eles (AG) **se** (PATrefl) banharam num mar de prata.*
- (b) *Os dois (AG) **se** (PATreci) detestam (um ao outro).*
- (c) *Hector (PAT) tornou-**se** (-) um verdadeiro Robin Hood, defensor dos pobres.*
- (d) *Trata-**se** (-) de um livro que li o outro dia.*
- (e) *Entre a Dinamarca e a Suécia, **se** (PASS) constrói uma ponte gigantesca (PAT).*
- (f) *Cobram-**se** (PASS) mensalidades altíssimas (PAT).*
- (g) *Celebrou-**se** (PASS) o fim do ano (PAT) com toda animação.*
- (h) *Jamais **se** (EXP) soube como fugiram do forte (PAT).*
- (i) *Está-**se** (PAT) diante de uma crise econômica mundial (LOC).*
- (j) *Compra-**se** (AG) casas (PAT).*
- (k) *Carina (AG) **se** (BEN) permitiu mais um dia na cama (PAT).*

Morphologically, *se* is ambiguous between accusative and dative. Substitution with *lhe* shows that only in the last example can *se* be regarded as a dative pronoun, suggesting **Odat** analysis. So the easy analysis in all other cases would morphologically be accusative case and syntactically **Oacc** function ... or would it?

(a) is the prototypical reflexive case, where *se* is a patient-object and refers to the same entity in the “real world” as the agent-subject. (b) is similar, with a patient-object, but *se* is plural and functions reciprocally, as can be shown by adding ‘um ao outro’.

In (b) and (c) the verbs are so-called pronominal verbs (*verbos pronominais*) where the reflexive pronoun has no semantic function at all, but is incorporated in the verb as such: ‘tornar-se’ – ‘to become’, ‘tratar-se de’ – ‘to be about s.th.’. Still, *syntactically*, nothing seems to stand in the way of an Oacc-reading:

Tornou-	se	<u>um verdadeiro Robin Hood, defensor dos pobres.</u>
P:v-fin	Oacc:pron	Co:np

Alternatively, in order to stress the verbs incorporating the pronoun, we could use a complex predicator with clause *form*: This way, the object complement (Co) turns into subject complement (Cs):

Tornou- se um verdadeiro Robin Hood, defensor dos pobres.
 P:v-fin Oacc:pron Cs:np
 P:cl

Cases (e-g) are reminiscent of the Scandinavian s-passives ('brevkassen [PAT] tømtes kl. 10'), where no agent (AG) – but only a patient (PAT) is specified, and where ordinary reflexivity is ruled out by the lack of an agent subject. *Construir* (e), *cobrar* (f) and *celebrar* (g) all have a valency that – in active clauses - demands **agent subjectives** and **patient objects**:

- (e') O governo (S-AG) constrói uma ponte (O-PAT).
- (f') O governo (S-AG) cobra altas mensalidades (O-PAT).
- (g') O governo (S-AG) celebra o novo ano (O-PAT).

Now, though *ponte* (e), *mensalidades* (f) and *novo ano* (g) clearly are subjects (as can be seen, for instance, from the plural agreement between *cobram* and *mensalidades*) – they are **patient** subjects, as in the passive versions of (e'), (f') and (g')

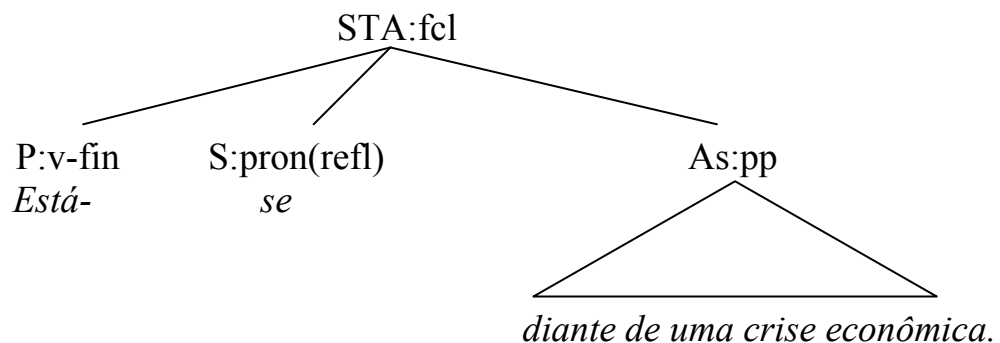
- (e'') Uma ponte (S-PAT) é construída.
- (f'') Altas mensalidades (S-PAT) são cobradas.
- (g'') O novo ano (S-PAT) é celebrado.

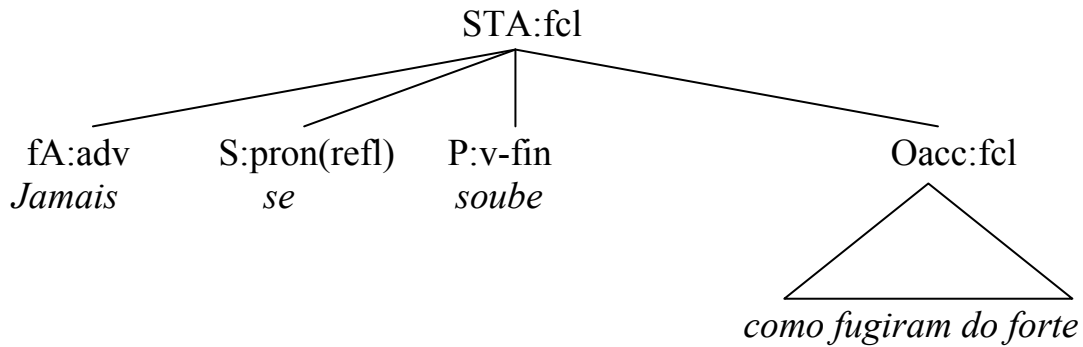
Therefore, though *syntactically* Oacc, *se* in (e-g) functions *semantically* more like a passive marker.

In some cases, however, neither a reflexive, pronominal verb or passive analysis will work. Consider (h) and (i). *Estar*, in (i) cannot take direct objects (Oacc) at all, *souber*, in (h), asks for experiencer – not clausal - subjects (EXP) in active clauses, and neither (i) nor (h) can be replaced by ordinary passives:

- *Foi sabido que ...
- *É estado diante de ...

Tagging *se* as subject (S), solves all these problems at once:





One could say that, in the evolution of the Portuguese language, *se* is slowly advancing from reflexive object - via passive marker for patient subjects – towards the semantic space reserved for impersonal pronouns in other languages, like *si* in Italian, *on* in French, *one* in English and *man* in Danish. Of course, such a process does not happen over night, which is why agreement restrictions are still strong with regard to the “*ex-subject*” (now Oacc) in such sentences, allowing – in most cases – an alternative, more conservative, analysis of *se* as Oacc:

Compram-	<i>se</i>	<i>casas.</i>
P:v-fin	Oacc:pron	S:n
(P:v-fin	S:pron	Oacc:n)

Performance is, however, gaining fast on competence, - to use Chomskyan terms, and singular *se*-predicators in connection with plural nouns or np’s do occur, forcing an agent subject reading on *se*:

Compra-	<i>se</i>	<i>casas.</i>
P:v-fin	S:pron	Oacc:n
P:v-fin	*Oacc:pron	*S:n

Here, *casas* cannot be subject for agreement reasons, so *se* fills the empty space – at the same time allowing *casas* to become direct object (Oacc) without breaching the uniqueness principle (which forbids two – unco-ordinated - direct objects in the same clause).

4. Subordination

In Portuguese, both finite (a-b) and averbal (c-d) subclauses are obligatorily introduced by a complementizer (clause header), while non-finite subclauses only feature complementizers in special constructions (e-f). Consider the following (subclauses underlined, complementizers in bold face, word class in parenthesis):

(a) não acredito que seja verdade (subordinating conjunction)
 A P Oacc:fcl
SUB P Cs

(b) aproveite quem quiser (relative pronoun)
 P S:fcl
 S P

(c) ajudou onde possível (relative adverb)
 P A:acl
 fA Cs

(d) embora jovem já sabia muito (subordinating conjunction)
 A:acl A P Oacc
SUB Cs

(e) não tem onde dormir (relative pronominal adverb)
 A P Oacc:icl
 fA P

(f) sei como adquirir outra. (relative pronominal adverb)
 P Oacc:icl
 fA P Oacc

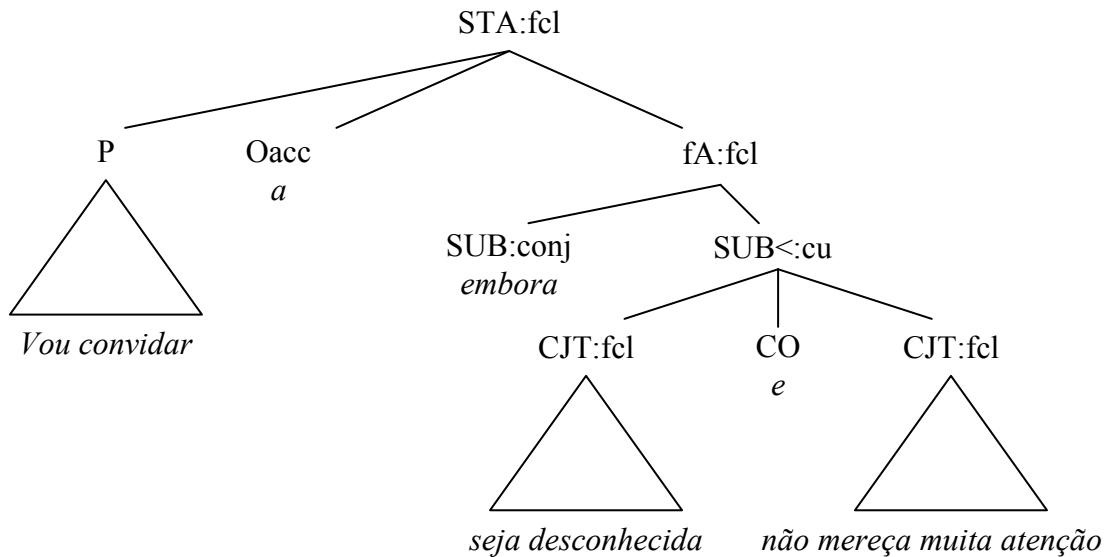
As shown in the examples, *complementizers* can be subordinating conjunctions or relative pronouns. The relative pronouns have their own specific argument or adjunct function within the subclause, - in the examples 'quem' (b) is a subject (S), while 'onde' (e, b) and 'como' (f) are adjunct adverbials (fA). Subordinating conjunctions, on the other hand, like 'que' in (a) and 'embora' in (d), have *no* argument or adjunct function within the subclause – they have *only* the subordinating function (**SUB**) of a clause header.

In subclauses with subordinators, one could then distinguish between the complementizer as a kind of “clause head”, and the remaining clause body as its argument. The function tags used will be subordinator (SUB) for the former, and subordinator argument (SUB<) for the latter⁹. Though not a primary constituent of

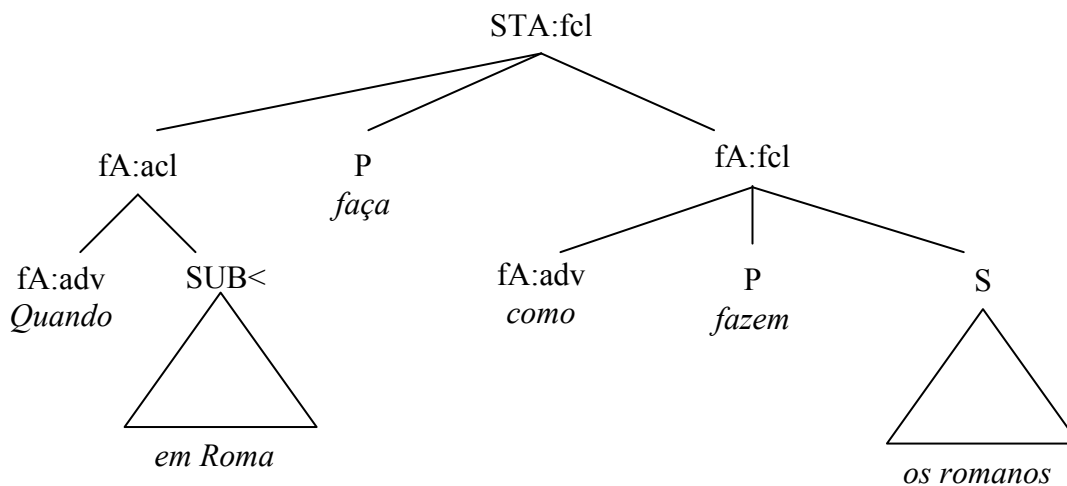
⁹ Structurally, this is reminiscent of the way prepositions head the rest of a pp. *If* prepositions are viewed as subordinators (SUB), DP's become a kind of subordinator argument (SUB<).

ordinary clauses, the SUB< category can be useful in describing co-ordination and averbal clauses:

- (a) Vou convidá-la, embora seja desconhecida e não mereça muita atenção.



- (b) Quando em Roma, faça como fazem os romanos.



As discussed in the chapter on clause types, a robust definition of what is a clause in Portuguese can be based on whether a constituent contains at least one verb and/or a complementizer. According to this definition, 'quando em Roma' is an averbal clause, since it contains a complementizer ('quando'), but no verb.

If we want to improve on the dummy function SUB< (complementizer argument) for acl-clause bodies, we could consider C(s) for 'jovem' in 'embora

jovem', and **A(s)**¹⁰ for 'em Roma' in 'quando em Roma, the functions that would be used with an explicit copula ('embora seja jovem', 'quando estiver em Roma'). As a matter of fact, some grammarians would argue that what we have called acl, is a full-fledged clause in its own right, - with a "zero constituent" (the elliptic verb) . Zero constituents do not, however, make sense in a word based dependency grammar like CG, and can be difficult to maintain pedagogically.

A special kind of acl subordination is the use of the relative adverb 'como' as comparative (SUBcom) or predicative (SUBprd) subordinator, typically in connection with a noun or noun phrase as acl clause body (SUB<).

(1) Trabalha **como** um escravo. (like a slave)
 P SUBcom SUB<
 fA:acl

(2) Trabalha **como** guia. (as a guide)
 P SUBprd SUB<
 fC:acl

In terms of valency, the acl's of both (1) and (2) are adjuncts, but are they *adverbial* adjuncts? In spite of its (clause) form, one might argue that at least (2) functions much like an fC (subject adjunct or adjunct predicative), offering predicative information about the subject: "é/parece guia". Consider also:

(3) Propus o velho funcionário **como** coordenador do projeto.
 P Oacc SUB SUB<
 Co:acl

For (1), some would argue that the acl is not really averbal at all, but could be turned into an fcl by adding a zero predicator constituent:

(1') Trabalha **como** [trabalha] um escravo.
 P fA P S
 fA:fcl

Now, "real" clause level function (fA for 'como' and S for 'um escravo') can be assigned in stead of the functionally "poor" SUB and SUB<.

For (2), the zero predicator solution doesn't work the same way (*Trabalha como [trabalha] guia), which is one of the (syntactic) reasons for making the distinction between (1) and (2) in the first place. Introducing an additional clausal layer one could instead try a copula 'trabalha como [quem **é/parece**] guia' yielding a predicative Cs function for guia (as above suggested for the whole acl). As a matter of fact, a copula predication can be inferred from (2), but not from (1):

¹⁰ Without a verb's valency, one could argue that a clause cannot contain verb-related arguments (S, O and C), but only adjuncts. This would leave us with fC(s) and fA(s), respectively.

Trabalha como guia. -> *é/parece* guia
 Trabalha como um escravo. -> **é/parece* escravo

Furthermore, the construction in (2) is reminiscent of a pp (prepositional phrase).

O corredor servia de cozinha . P <u>H:prp DP</u> fA/Cs:pp	O corredor servia como cozinha . P <u>SUB SUB<</u> fA/Cs:acl
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In fact, many grammarians would classify 'como' in these cases as a preposition, and the acl's as pp's, breaking the terminological link to other averbal constructions like 'quando em Roma' and 'embora jovem'. On the other hand, if some let prepositions usurp the place of subordinators, why not argue that prepositions are themselves a kind of subordinator? After all it is prepositions that – in Portuguese – are used to subordinate argument clauses to nouns, adjectives, adverbs and auxiliaries, in fact, to everything but other clauses. In the examples, prepositions are analysed both traditionally (on the left), i.e. as (head-) constituent of a pp, and (on the right) as subordinator within a non-finite clause (icl).

Teme **que** chova no dia da festa.
 P **SUB** SUB<:fcl
 Oacc:fcl

Era sua a proposta **de** levar um proceso.
 P Cs H DP:icl
 H:n DNarg:pp
 S:np

Era sua a proposta **de** levar um proceso.
 P Cs SUB P Oacc
 H:n DNarg:icl
 S:np

Açúcar era impossível **de** adquirir.
 S P H DP:v-inf
 H DAarg:pp
 Cs:adjp

Açúcar era impossível de adquirir.
 S P SUB P
 H DAarg:icl
 Cs:adjp

Hesitava antes **de** lhe contar tudo.
 P H DP:icl
 H DAarg:pp
 fA:advp

Hesitava antes **de** lhe contar tudo.
 P SUB Odat P Oacc
 H DAarg:icl
 fA:advp

One of the interesting things about comparing the pp- and icl- analyses is that they are *structurally* the same from the pp/icl-level *upward*, with nodes and branches in the same places, but differ from the pp/icl-level *downward*, the icl-analysis being structurally flatter and "simpler", since the SUB< -node corresponding to the pp-analysis' pp-node is superfluous, placing the icl's own constituents (P, O etc.) on the same level as the preposition-subordinator itself.

symbol	category	examples
SUB	subordinator subordinador subordinator	Acho que um jardim zoológico sem hipopótamos não merece subsídios.
SUBcom COM	comparative subordinator subordinador comparativo komparator	Esta fofqueira fala como uma cachoeira .
SUBprd PRD	predicative subordinator (role complementizer) subordinador predicativo rolleindleder	Trabalha como guia.
SUBaux PRT-AUX	auxiliary subordinator subordinador auxiliar (partículo auxiliar) auxiliartikel	Voltou a molestá-la no escritório. Você acabou de entrar na Home Page da universidade de Århus. Hipopótamo tem que dormir muito.
SUB< AS<, C<	[averbal] clause body tronco de oração [averbal] sætningsstamme (indlederkomplement)	Quando em Roma , faça como os romanos.

5. The function of verbal constituents

It is the verbal constituent that integrates a clause's arguments, i.e. subject (S), objects (O) and predicative complements (C). Verbs *are* syntax, they project syntactic structure by the power of their valency. Typically, the verbal constituent predicates something of the clause internal subject (a, d), an anaphoric or unexpressed subject (b), - or "the real world" (c, e). This predication can reside in the verb itself (intransitive verbs like "trabalhar" or "dormir"), cf. (a, e), in a predicative complement (with copula verbs like "ser" or "estar"), cf. (d), or in the relation between verb and object (transitive verbs), cf. (b, f).

- (a) O hipopótamo **dormia**.
- (b) **Planejava** de **viajar** para Portugal.
- (c) **Deixa!**
- (d) Carmem **era** feliz.
- (e) **Chovia**.
- (f) **Bateu** no cachorro.

Thus, notwithstanding the fact that objects and predicatives are part of the predication, and that even adjuncts can predicate something of the subject, the verbal constituent is unique in being able to "predicate more than itself". We will emphasize this syntactic instrumentality by using the function term 'predicator' (**P**), as advocated in the English VISL system.

Predicators needn't consist of single verbs but can be complex verb phrases (vp). Complex predicators in Portuguese consist of verb chains headed by one or more auxiliaries (AUX) and "tailed" by a non-finite main verb (MV), possibly linked by auxiliary subordinators (SUBaux). Consider the following examples where AUX and MV have been introduced on the same level as the clause's argument and adjunct constituents, yielding – at least on the clause level - a "flat" notation akin to the word based Constraint Grammar function tags.

- (a) Recentemente, **tem chovido** muito.
 fA AUX MV fA
- (b) **Foi reprovada** (1) por não lhe **ter ajudado** (2).
 AUX MV fA Odat AUX MV
 H DP:icl
 fA
- (c) **Vou** lhe **fazer** uma proposta.
 AUX Odat MV Oacc

In (a) and (b) the notion of complex predicators and verb phrases (P:vp) can be easily introduced by adding a new node to the trees (b'). In (c) however, one of the objects (Odat) appears in the middle of the verb chain, - without itself belonging to

complex predicator analysis (c), where all verbal material is lumped into one constituent, annihilating (a)'s tree-branching left of the preposition ('de'):

(c) Vem/gosta? de nadar no mar de noite
 P fA fA

The same kind of constituent conflict arises for verb-chains without a preposition subordinator. Here, the conflict is between direct object (Oacc) – of a main verb – and auxiliary complement (AUX<) – of an auxiliary. The two labels can "co-exist" structurally in (a') and (b'), as long as there is a node in the tree to attach them to. The complex predicator analysis, however, while elegant *if you have* agreed on what an auxiliary is, completely disallows any object reading for 'comprar um novo carro' in (c').

(a') Quer comprar um novo carro. (b') Quer comprar um novo carro
 MV Oacc AUX AUX<

(c') Quer comprar um novo carro.
 P Oacc

Finally there is one (and only one) type of verb chain with a conjunction as auxiliary subordinator:

(b'') Temos que admitir a sua inocência.
 AUX SUBaux:conj MV Oacc
 AUX<:icl

or, with a complex predicator analysis:

(c'') Temos que admitir a sua inocência.
 AUX SUBaux MV Oacc
 P:vp

Few grammarians would question the "auxiliariness" of 'ter que', but those who do, would argue for an (a'') analysis with the auxiliary complement (AUX<) of (b'') tagged as direct object (Oacc), and 'temos' as main verb (MV), on the grounds that 'ter' simply maintains its monotransitive valency, whether the object is a noun ('Temos **dinheiro**') or a clause ('Temos **que admitir ...**').

symbol	category	examples
P	predicator predicador prædikator	Hipopótamo come folhas. Hipopótamo tem que dormir muito.
MV	main verb verbo principal hovedverbum	Bebe muita cerveja. Todo dia mandava (1) o filho comprar (2) leite. Hipopótamo <u>tem que dormir</u> muito.
AUX	auxiliary verbo auxiliar hjælpeverbum	A interface foi feita por uma equipe da Winsoft. Estou lendo um romance português. Hipopótamo tem que dormir muito.
AUX<	auxiliary complement complemento auxiliar auxiliarkomplement	Hipopótamo <u>tem que dormir</u> muito.

6. Group forms and group level constituent function

Groups (or phrases) are here defined as syntactic constituents that are not clauses, and consist of more than one word. In order not to be clauses, none of the group node's immediate constituents must be a predicator or a complementizer (subordinator). Every group features 1 head (**H**) and one or more dependents (**D**), which may be either modifiers (**Dmod**) or arguments (**Darg**). In this text, we will denote all kinds of group level dependents with the umbrella term *adjuncts*.

As on the clause level, arguments are valency bound. Modifiers are on the group level what adjuncts are on the clause level - they are "free" constituents without valency slots. The word class inventory of a group's head and dependents defines the group's form category. Accordingly, 4 main types of groups can be distinguished:

group type	typical heads	typical adjuncts (modifier or argument dependents)
np noun phrase	noun proper noun "substantival" pronoun	adjective article "adjectival" pronoun
ap adpositional phrase	adjective adverb "adjectival" pronoun	adverb
pp prepositional phrase	preposition	noun "substantival" pronoun icl fcl
vp verb phrase	verb (main verb [semantically] or 1. auxiliary [dependency])	verb (auxiliaries [semantically] or 2./following verbs [dependency]) preposition or the conjunction 'que'

Groups can be classified in yet another way, as hypotactic (endocentric) , katatactic (exocentric) and paratactic. **Hypotactic** groups (np- or ap-type groups) can semantically be substituted by their head, which is not true of **katatactic** groups (pp-type). Some grammarians even base their definition of 'head' on a group being hypotactic according to this substitution rule – thus, a pp would not have a head at all, since none of its constituents can stand for the whole group. Verb groups (vp) are the most special of all: they are hypotactic in the sense that the main verb can semantically replace the whole vp, but in dependency and valency terms, it is the main verb (or a subordinated AUX<:icl), that is an argument of the auxiliary, not the other way around. A **paratactic** group consists of two co-ordinated constituents,

usually of the same form type, that share a common function label. Parataxis will be discussed in detail in chapter 9 (Co-ordination).

symbol		category	examples
np	np	noun phrase	Era um <u>homem</u> como outro qualquer . (np)
	propp	sintagma nominal	A velha <u>avó</u> dormia na rede. (np)
	pronp	nominalsyntagme	Vou fazê-lo eu mesmo . (pronp) O seu nome era Mário Moreno dos Santos . (propp)
ap	adjp	adpositional phrase	As árvores no jardim eram muito <u>velhas</u> . (adjp)
	advp	sintagma adposicional	Foi um presidente um pouco <u>iconoclasta</u> . (adjp)
	detp	adpositionssyntagme	Nesta saia, parece mais <u>jovem do que as amigas</u> . (adjp)
			Costuma falar muito <u>devagar</u> . (advp)
			Ainda <u>hoje</u> vivem de caça e pesca. (advp)
			Era muito <u>mais</u> vinho <u>do que imaginava</u> . (detp)
vp		verb phrase sintagma verbal verbalsyntagme	Ele continua <u>mexendo</u> nas tarefas dos outros. Vem de lhes <u>propor</u> um acordo. Temos que lhe <u>dar</u> mais dinheiro.
pp		prepositional phrase sintagma preposicional præpositionssyntagme	Abriu a janela da sala Gostou do que viu . Pedro da Silva Mudamos para São Paulo .

6.1.

Noun phrases (np)

The prototypical np is headed by a noun, and allows a choice of adnominal adjectives (group-level dependents), typically pre- and post-modifiers. Heavy (i.e. long or complex) modifiers and adnominal *arguments* appear only to the right of the head.

Typical **premodifiers** are:

articles:	<u>um</u> dia, <u>o</u> Manoel
determiner pronouns (adjectival pronouns):	<u>todos</u> <u>estes</u> livros
numerals:	<u>7</u> nanos

Typical **postmodifiers** are:

adjectives:	<u>uma casa grande</u>
prepositional phrases (pp)	<u>o jatinho do presidente</u>
relative subclauses:	<u>o computador que comprou</u>

Atypical position often entails a change in meaning. Thus, adjectives in premodifier position become more "subjective", less "measuring" than in postmodifier position.

Compare: um *grande* homem ('great') – um homem *grande* ('big')

Only certain adjectives tend to occur in premodifier position. In some cases, grammarians even disagree on the word class of a prenominal modifier, because it *looks* like an adjective (and inflects like one), but *functions* like a (determiner) pronoun or numeral. Consider the following cases¹¹:

- a primeira noite (numeral or adjective)
- a última unção (adjective or numeral)
- umas/algumas/várias propostas (adjective or pronoun)
- a mesma cor, outra cor, diferentes cores (adjective or pronoun)

Determiner pronouns in postmodifier position are rare, comprising possessives and - with a change in meaning – 'todo'. 'próprio' and 'mesmo' occur postnominally with independent "substantial" pronouns, that do not allow premodifiers:

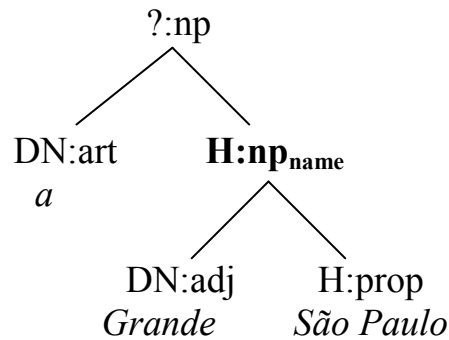
- responsabilidade sua* (cp. 'a sua mãe' - *'a mãe sua')
- a casa toda* ([whole], cp. 'toda casa' [every])
- ele mesmo* ([himself], cp. 'a mesma cor' [same])
- ela própria* (cp. 'o próprio presidente', 'o próprio Cardoso')

"Adjectival" modifiers need not be individual words, but can become complex forms themselves (adjective phrases), as discussed in chapter 6.2:

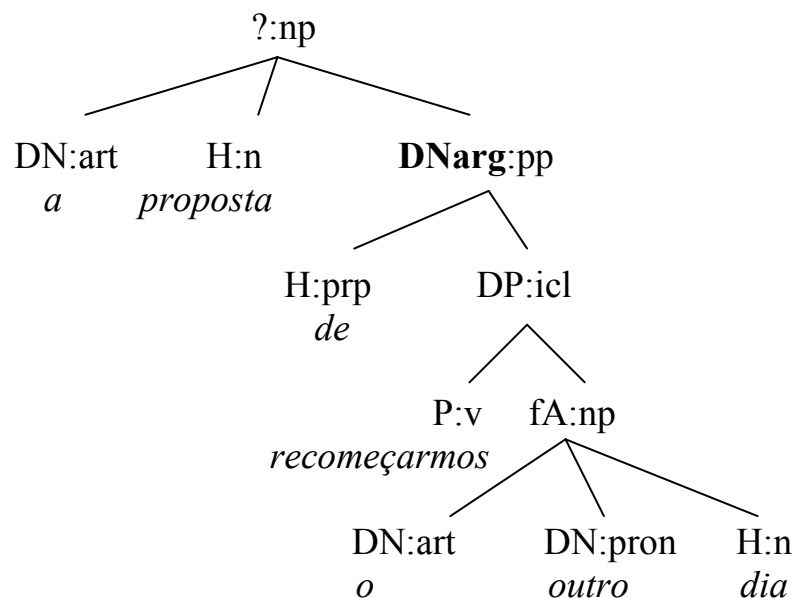
¹¹ Adjective candidates that *are* treated as adjectives in the framework of this text, are underlined.

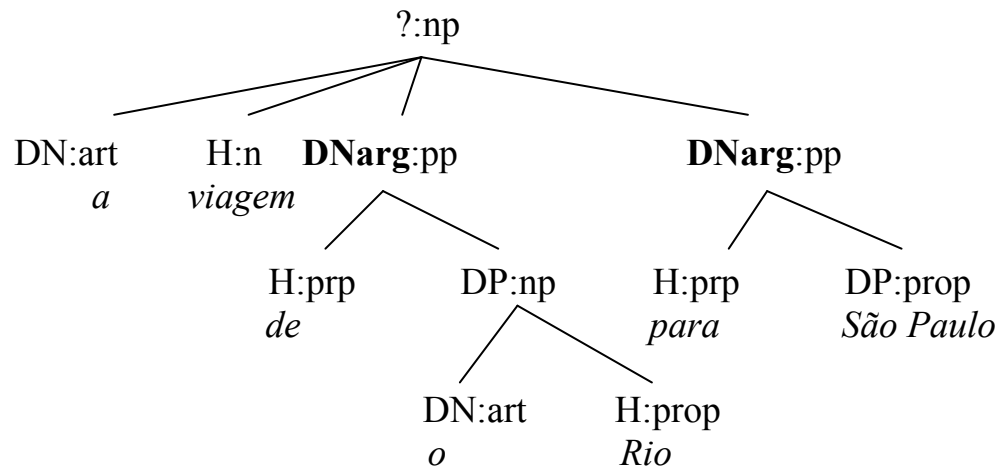
In the last example, "name-hood" first arises on the np-level, since neither of the two constituents of the modifier np qualifies as a proper noun (prop).

One way of marking what's part of a name and what isn't, in terms of constituents, is by means of constituent bracketing. Thus, instead of marking 'a' and 'Grande' in 'a Grande São Paulo' as "sister"-modifiers on the same level, one would first bracket 'Grande' onto 'São Paulo', forming a complex head for the article 'a':



Noun phrases are much more likely to have modifiers than arguments, the latter occurring especially in connection with *deverbal* noun heads, i.e. nouns that have been derived from verbs. Arguments are here "borrowed" from the valency pattern of the concerning verb. 'proposta', for instance, can govern an argument replacing the direct object of the verb 'propor', and 'viagem' borrows its valency from the argument adverbials of the verb 'viajar':





Deverbal nouns can borrow from their parent verb not only ordinary arguments, but also clause level adjunct adverbials, denoting time, space, manner, or an agent of a passive, turning *fA*-labels into *DNmod*-labels.

a publicação, na revista VEJA, de um artigo sobre SIDA
 DN:art H:n DNmod:pp DNarg:pp
 ?:np

a proclamação da república, pelo chefe do exército
 DN:art H:n DNarg:pp DNmod:pp
 ?:np

The prepositions that attach postnominal argument pp's to their head noun, cannot normally be exchanged, and have to be memorized individually in connection with the valency bearing noun:

abertura **para**
 afinidade **a**
 confiança **em**
 cumplicidade **com**
 discussão **sobre**
 escolha **entre**
 lei **contra**
 respeito **por**
 semelhança **com**
 temor **de**

Finally, one might consider cardinal numbers after certain "counting nouns" as arguments:

capítulo 7
páginas 8-12

século vinte
no dia 5 de julho 1998

Ordinal numbers, however, inflect like adjectives, and we will treat them as modifiers, even in postmodifier position.

rei Alfonso III (terceiro)¹²

A special kind of adnominal adjectives are appositions (**DNapp**) and adject predicatives (**DNc**). Both are isolated from the rest of the np by a comma, and thus more loosely bound than ordinary modifier adjectives. The difference between the two is largely semantic, but appositions are usually proper nouns or definite np's, while adject predicatives are adjectives, participles or indefinite np's.

O	maior	poeta lusófono,	Camões,	vivia ...
DN:art	DN:adj	H:n	DN:adj	DNapp:prop
		SUBJ:np		P:v-fin

Camões,	um	grande	poeta lusófono,	vivia ...
	DN:art	DN:adj	H:n	DN:adj
H:prop		DNc:np		
	SUBJ:np			P:v-fin

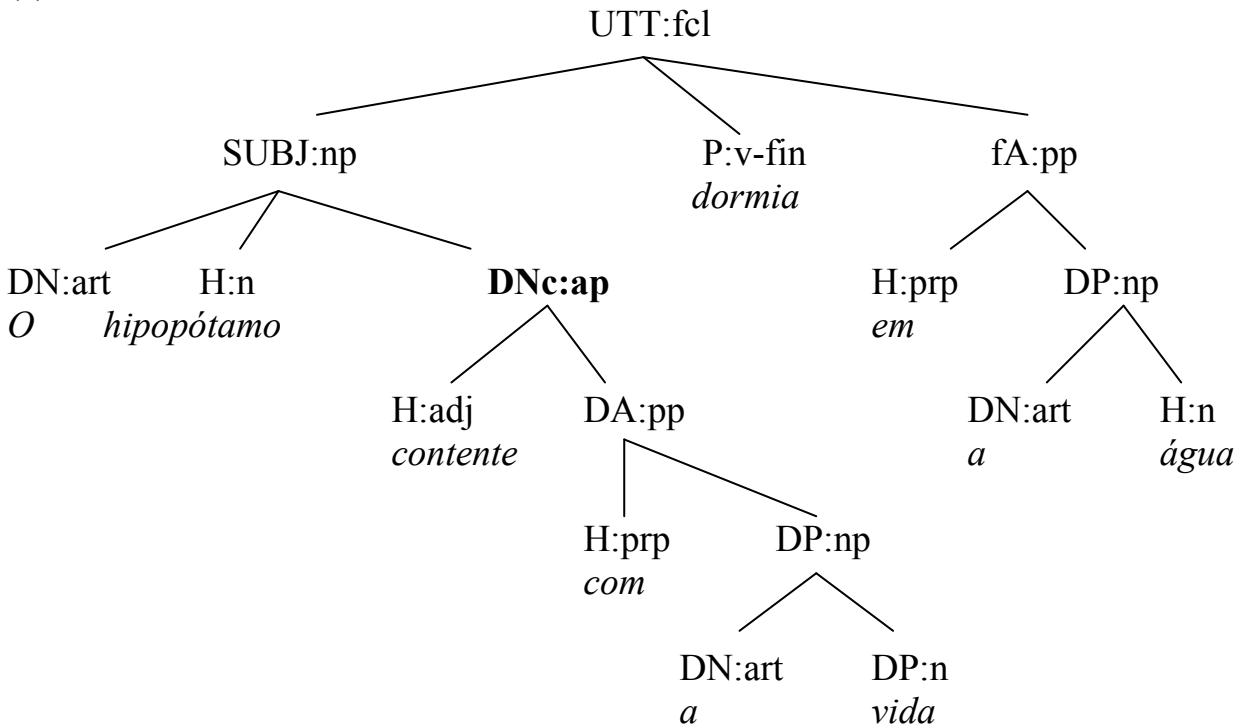
Apposition adjectives are identifiers and help define or denote the referent of the np in question, while adject predicatives are descriptive and act much like *adjunct predicatives* (fC) on the clause level. As a matter of fact, ambiguity as to whether a non-argument predicative attaches at clause or group level is not at all rare. Thus, predicatives left of the subject (a), or comma-separated predicatives to the right of the predicator (c) are clearly fC, while the same predicative “feels” more like a DN-constituent if found directly to the right of the subject (b).

- (a) **Contente com a vida**, o hipopótamo dormia na água.
- (b) O hipopótamo, **contente com a vida**, dormia na água.
- (c) O hipopótamo dormia na água, **contente com a vida**.

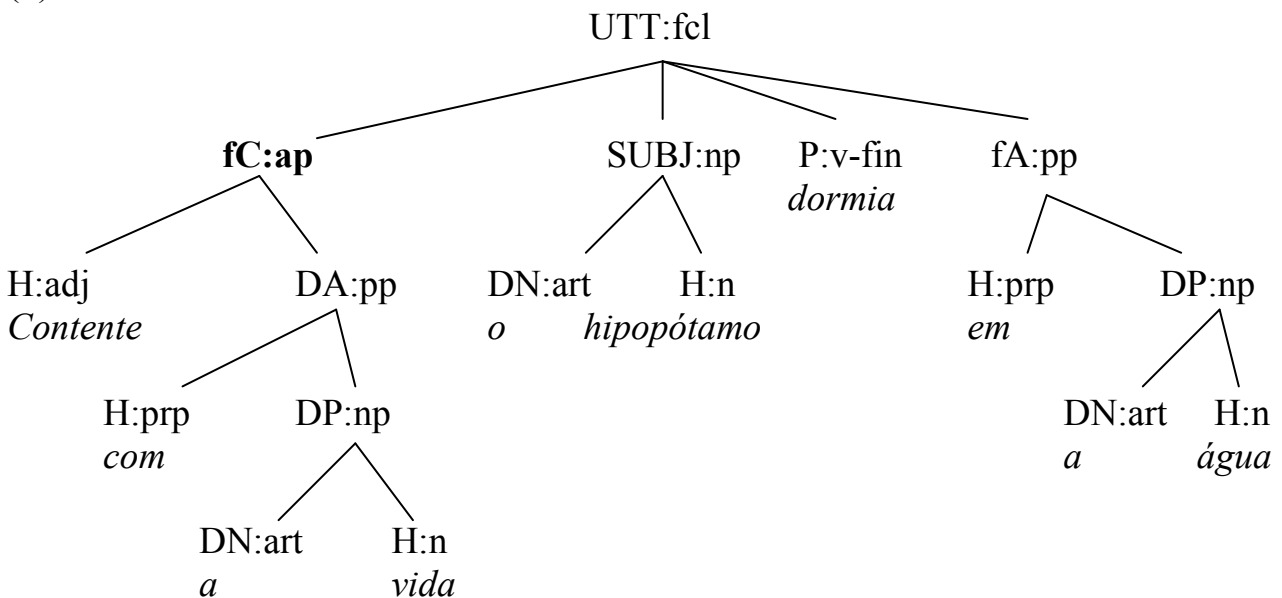
One argument in favour of the DNc analysis for (b) is the fact that the constituent can be replaced by a DN relative clause (which cannot be moved to other positions in the sentence): *O hipopótamo, que era contente com a vida, ...* Note that it is the comma-separation between np-head and the DN dependent, that makes a DNc. For que-clauses, the distinction between DN (without comma) and DNc (with comma) equals the semantic distinction between restrictive (necessary) and parenthetical (non-necessary) relative clauses.

¹² Portuguese treats “king numbers” above 10 as cardinals (rei Alfonso XIII [treze]), posing a special form problem for the distinction advocated here.

(a)



(b)

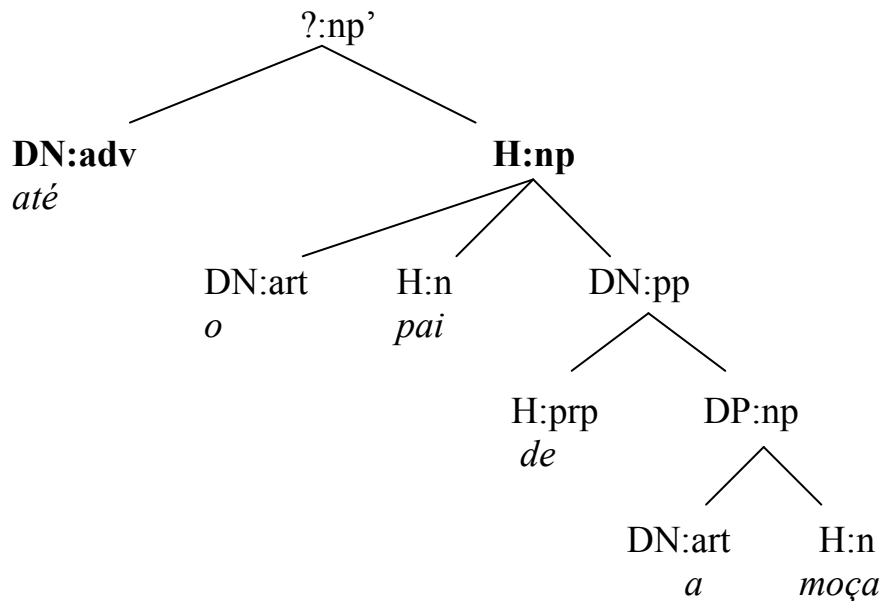


Finally, all np's can be modified by certain operator adverbs denoting negation ('nem'), set inclusion ('também', 'só') or avaluation ('até') :

até ele, **nem** Pedro, **só** isso, dinheiro **demais**

However, in the presence of other modifiers, it becomes clear, that these "operators" don't mingle with other modifiers and it does not seem entirely satisfying to treat them as constituent-sisters of ordinary modifiers. Rather, they modify the *whole* np,

as could be expressed by adding one bracket or tree level to our syntactic analysis, with the "inner np" as the complex head of a kind of "meta-np" (np') :



Further discussion:

One of the functions of the operator adverbs mentioned above is that of focus marker (cp. chapter 11 on focus-constructions). Focus marker dependents (**Dfoc**) put their head into focus, and they can be attached to heads of *any* form (x), - words, groups, clauses and compound units, generating a meta-constituent of the same form (x'). By using the Dfoc tag in these cases, we do not have to uphold the awkward distinction between DN, DA, DP and so on, for what appears only one type of function (Dfoc).

As a positive side effect, most independent ("substantial") pronoun groups ('até ele', 'ele mesmo') become "meta-words", - which is more in line with one's view on independent pronouns as "unmodifiable" (cp. 6.4).

In order to avoid conflict with VISL's general definition of words and groups, we will, however, refrain from using terms like pron', n', adj' etc. for focused individual words. Thus, ordinary group form categories (or, at most, np', ap' etc.) will be used in these cases, too.

6.2.

Adpositional phrases (ap)

The term adpositional phrase will here be used to lump together adjective phrases (adjp) , adverb phrases (advp) and (adjectival) determiner pronoun phrases (detp) , all of which allow the same prototypical type of modifier – intensifier/quantifier adverbs, - and not much else. Thus, all three types of ap's can be premodified by the adverb 'muito' .

muito inteligente, <u>DA:adv</u> H:adj ? :adjp	muito devagar, <u>DA:adv</u> H:adv ? :advp	muito poucos <u>DA:adv</u> H:pron-det ? :detp
--	---	--

Only very few postmodifiers can be attached to adjectives or adverbs, but the few are intensifiers/quantifiers:

chato demais <u>H:adj</u> <u>DA:adv</u> ? :adjp	mais depressa ainda <u>DA:adv</u> <u>H:adj</u> <u>DA:adv</u> ? :advp
---	--

In the last example, one might argue that 'mais' and 'ainda' form *one disjunct* constituent, as when both appear left of the ap-head, with an advp - not an adverb - modifying an adjective head:

ainda mais depressa <u>DA:adv</u> <u>H:adv</u> <u>DA:advp</u> <u>H:adv</u> ? :advp
--

With the (pre)modifying advp split into two parts of a disjunct constituent, we get the following analysis:

mais depressa ainda <u>H:adv</u> <u>DA:adv</u> <u>DA:advp-</u> <u>H:adv</u> <u>-DA:advp</u> ? :advp
--

Though "adverbial" in function, the quantifier modifiers in an ap need not be adverbs proper, or even adverbial phrases (advp) , they can instead be borrowed from other form categories¹³:

¹³ Even the archetypical intensifier 'muito' itself, with its inflecting morphology, *could* be treated as a determiner pronoun.

nada	agradável	um	tanto	iconoclasta
<u>DA:pron-indp</u>	H:adj	<u>DN:art</u>	H:pron-det	
?:adjp		<u>DA:np</u>	H:adj	
		?:adjp		

Determiner phrases are very rare, and restricted to quantifier modifiers, but adjp's and advp's do allow a few other – non-quantifying – modifiers:

manner adverbs: *academicamente verboso*
time operators: *já morto*

Like np's, ap's allow certain logical, set or modal operators as premodifiers:

nem	aqui,	não	ainda,	ao menos	aqui
<u>DA:adv</u>	H:adv	<u>DA:adv</u>	H:adv	<u>DA:pp</u>	H:adv
?:advp		?:advp		?:advp	

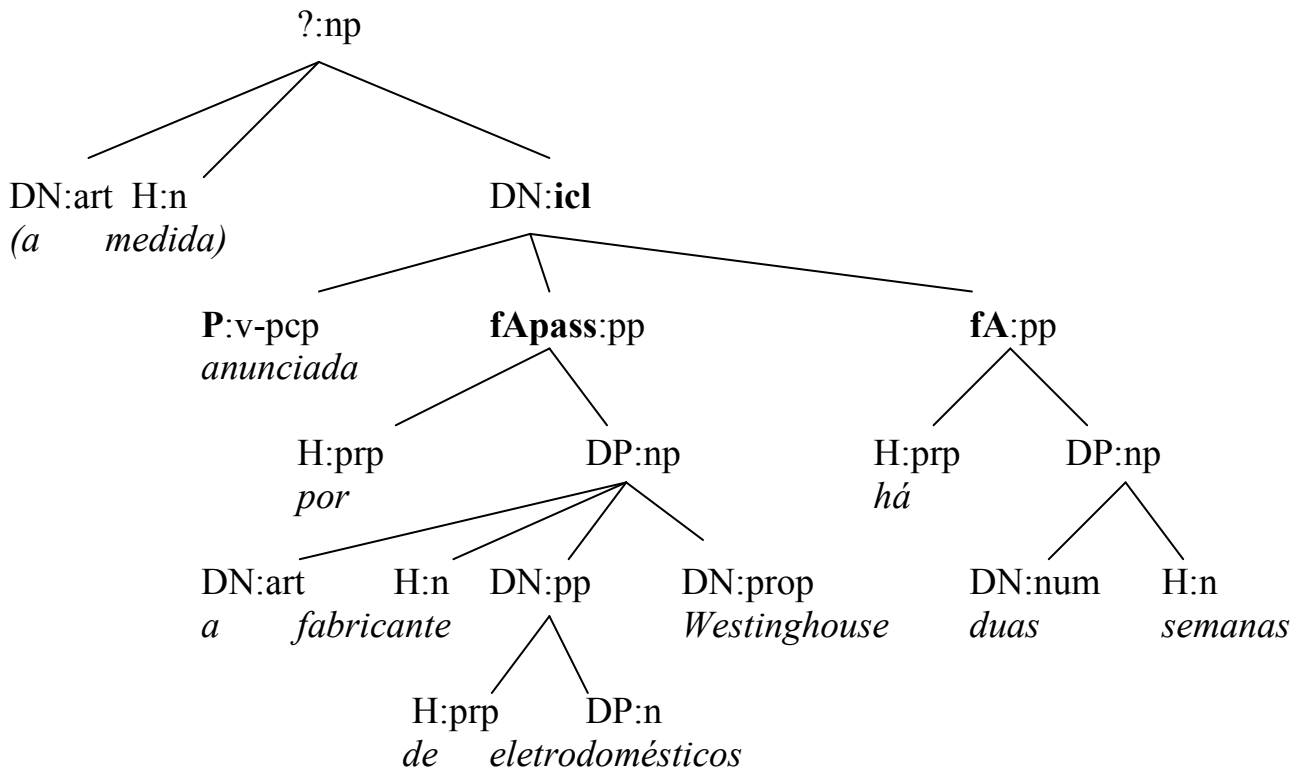
Most modifier variation, however, is seen with "adjectival participles", i.e. participles used as modifiers in noun phrases, not as part of a verb chain, because participles – even as modifiers – retain their parent verb's affinity for adjuncts and even arguments (the function of which could be attached to the DA-tag in **small letters**).

(mares)	nunca	antes	navegados
	<u>DA:adv</u>	H:adv	
	<u>DAa:advp</u>	H:v-pcp	
		DN:adjp	

(testes)	apressadamente	corrigidos
	<u>DAa:adv</u>	H:v-pcp
	DN:adjp	

(dinheiro)	investido	em	ações
		<u>H:prp</u>	DP:n
	<u>H:v-pcp</u>	<u>DApiv:pp</u>	
	DN:adjp		

Due to the rich clause-like structure in participle ap's, one obvious alternative analysis is that of non-finite clause (icl) in stead of ap (cp. chapter 7.2.3.1):



Participle-based ap's are not the only ones to feature arguments. Adjectives can have a valency, too, the argument being a prepositional phrase (pp) introduced by a specific preposition dictated by the adjective's valency pattern.

rico	em	ouro	cheio	de	luxo	parecido	com	ele
	<u>H:prp</u>	<u>DP:n</u>		<u>H:prp</u>	<u>DP:n</u>		<u>H:prp</u>	<u>DP:pron-pers</u>
<u>H:adj</u>	<u>DAarg:pp</u>		<u>H:adj</u>	<u>DAarg:pp</u>		<u>H:adj</u>	<u>DAarg:pp</u>	
	?:ap			?:ap			?:ap	

Adverbs with a valency pattern are rare:

relativamente	à lei	Pagou	tudo,	inclusive	a viagem
<u>H:adv</u>	<u>DA:pp</u>			<u>H:adv</u>	<u>DA:np</u>
	?:ap	P:v-fin	Oacc:pron	fA/fCo:ap	

In the last example 'inclusive' translates as 'including'. There is another reading, equivalent to 'até' ('even'), where 'inclusive' is an operator adverb and functions as a (focus) dependent rather than as a head (cp. 'further discussion' in chapter 6.1):

Pagou	inclusive	a viagem
	<u>Dfoc:adv</u>	<u>H:np</u>
P:v-fin	Oacc:np'	

Some adverbs form "complex prepositions" ('antes de', 'depois de') or "complex conjunctions" ('antes que', 'depois que'), that could be analysed as adverbs heading

ap's with pp- or fcl-arguments, respectively. Another case are the comparative adverbs 'mais', 'menos', 'tão', 'tanto' that valency-govern comparandum arguments (DAcom) in constructions like '**menos** formosa do que uma hipopótama' (cp. chapter 9).

6.3. Prepositional phrases (pp)

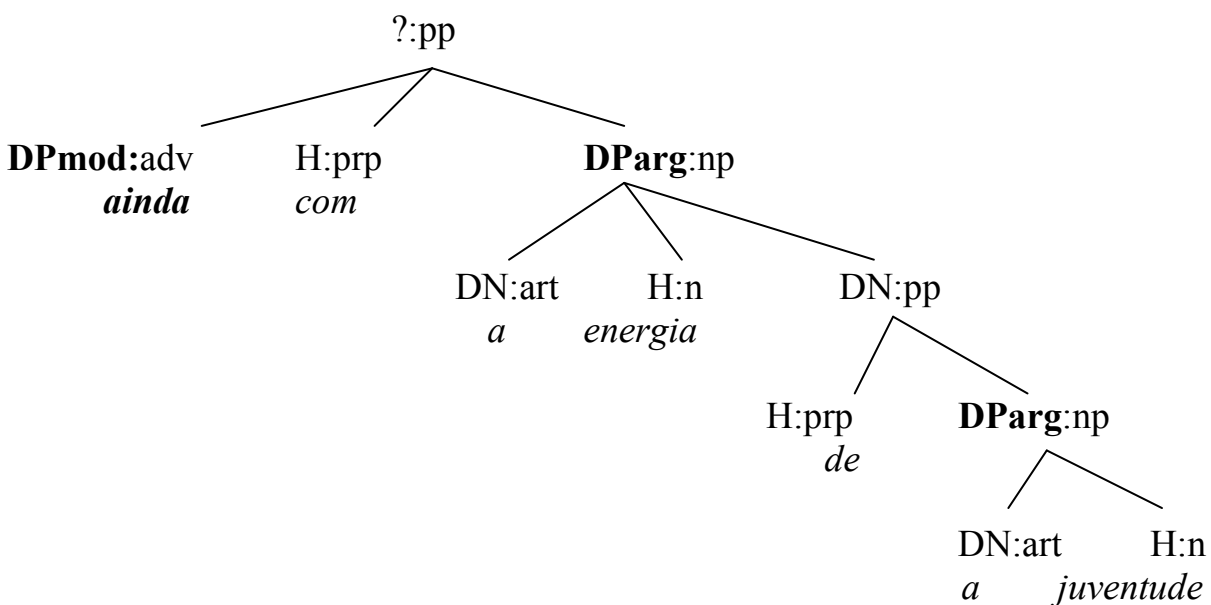
A prepositional phrase is not hypotactic (or endocentric), like np's and ap's. Rather, it is katatactic (or exocentric), as none of its constituents can syntactically stand for the whole group. However, valency-wise it is the preposition that links the group to a head on the next syntactic level. Thus, it is a specific preposition that is governed and "asked for" when a verb, noun or adjective allows pp-arguments. Therefore, in dependency grammar, the preposition counts as head (H) of the pp, with the rest of the pp rolling as the preposition's [dependent] argument (DParg or, simply, DP).

The argument position can be filled by almost any type of word class, group or clause, but most typically by np's and those word classes that qualify as np-heads, including infinitives and infinitive clauses¹⁴.

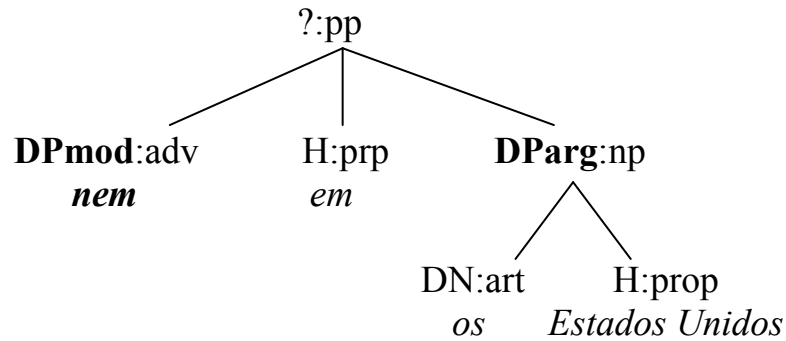
passeava com a mãe (np)
 discutiram sobre você (pron)
 preparou-se para a palestra que ia dar o outro dia (np)
 gostava de ler na cama (icl)
 andava com medo de magoá-la (icl)

However, also adverbs ('até **hoje**', 'para **aqui**') and finite clauses ('sem **que o soubesse**') do occur as DP's.

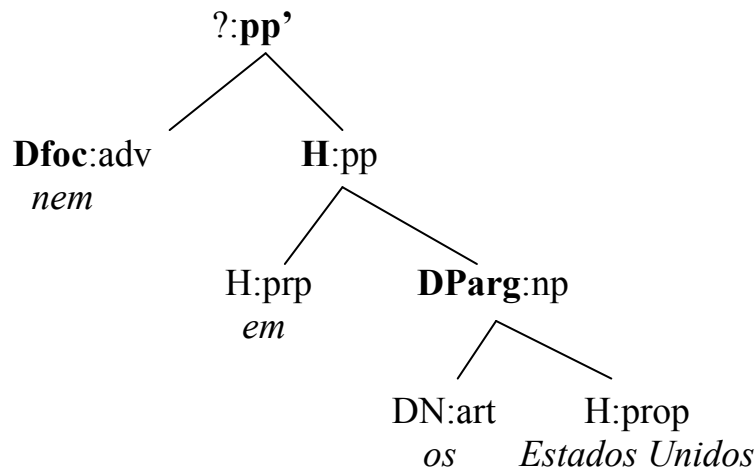
pp's in general do not allow ordinary modifiers like np's and ap's, but only the kind of "operator adverbs" already mentioned in the last chapter, and – in a few cases – premodifying intensifiers. Both only occur as preadjectives, and a simple analysis would treat them as "sisters" of the preposition's *postadject* argument.



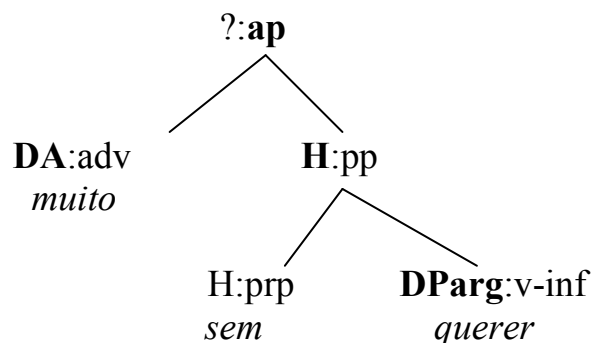
¹⁴ In Portuguese, infinitives and infinitive clauses even allow preposing a definite article, like ordinary nominal material: *o **começarmos cedo** vai ajudar muito*.



Like with np's and ap's, one could argue against this "flat" analysis that 'ainda' and 'nem' are not modifiers of a preposition at all, but rather focus markers for the whole pp, introducing an additional bracket/level and making the kernel pp the complex head of a new form, a kind of "meta-pp" (pp')



Likewise, intensifiers could be analysed as modifying the pp as a whole, creating an ap in the process:



By opting for analyses involving Dfoc's and DA's, the "real" pp is turned into a kind of complex head within a larger group, and cannot itself contain any dependents but the DParg constituent.

Functionally, pp's can be prepositional objects (Opiv), argument adverbials (A), adjunct adverbials (fA), or – on the group level – arguments or modifiers in np's (DNarg, DNmod) or ap's (DAarg, DAmo).

Não bate **no pobre cachorro!** (Opiv)
 Mandaram-no **para a Índia.** (Ao)
Sem mais nada, venderam a velha casa, sede da família durante séculos. (fA)
 Lhe deu uma coroa **com oitenta jóias.** (DNmod)
 Era grande **de corpo e coração.** (DAmod)
 Era legendaria a sua capacidade **de tornar em ouro o que tocava.** (DNarg)
 Escolheu uma senha quase impossível **de lembrar.** (DAarg)

In a few cases, pp's can appear as predicatives (complements) , either on clause level (Cs, fC) or group level (DNc).

Com setenta anos, não queria mais trabalhar. (fC)
 Está **com febre.** (Cs)
 Mário Goncalves, **de Pernambuco**, mantém que até tocou num extraterrestre.
 (DNc)

With the exception of adjunct adverbials (fA) and adjunct predicatives (fC), pp's are almost always located to the right of their valency head. Like conjunctions, they add – and subordinate – new material with the linear flow of language, making syntactic tree structures "heavy" on the right hand side.

With regard to subordinating function, the prepositions 'com' and 'sem' are a special case. They can create a kind of clausal nexus without verbs, conjunctions or relatives. Consider:

(foi surpreendido) **com o rosto na caixa pública**
 (foram fotografados) **com todo mundo já seminu**
sem ela para ajudar (não conseguiu nada mais)

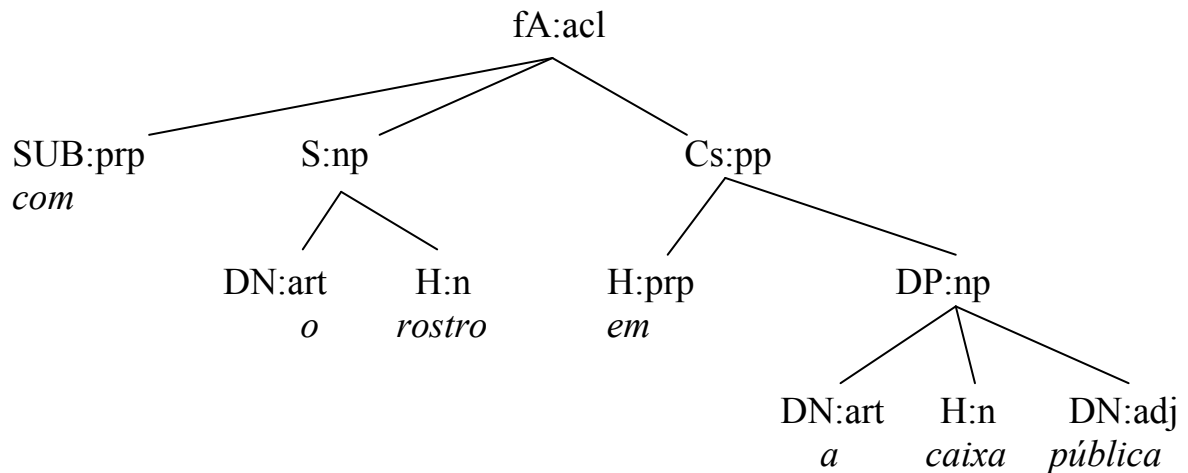
In these constructions (bold face), the preposition subordinates a clausal nexus, where a kind of predicative ('na caixa pública', 'já seminu', 'para ajudar') is predicated of a nominal unit (np, noun, proper noun, independent pronoun) – 'o rosto', 'todo mundo', 'ela'. The question is, do we use (a) a real **clausal analysis** and treat the nominal element as subject (S) and the predicative as subject complement (Cs) or adverbial (As), or do we (b) opt for a **group analysis**, with the predicative as a group-level DNc?

A group analysis seems more conservative, since it doesn't assign the preposition any unusual function and is structurally close to the even more conservative reading where the DNc tag becomes an ordinary attributive DNmod. Also, clause functions like S and Cs usually presuppose some verbal valency (a copula verb, for instance), -which just isn't there¹⁵. On the other hand, clause

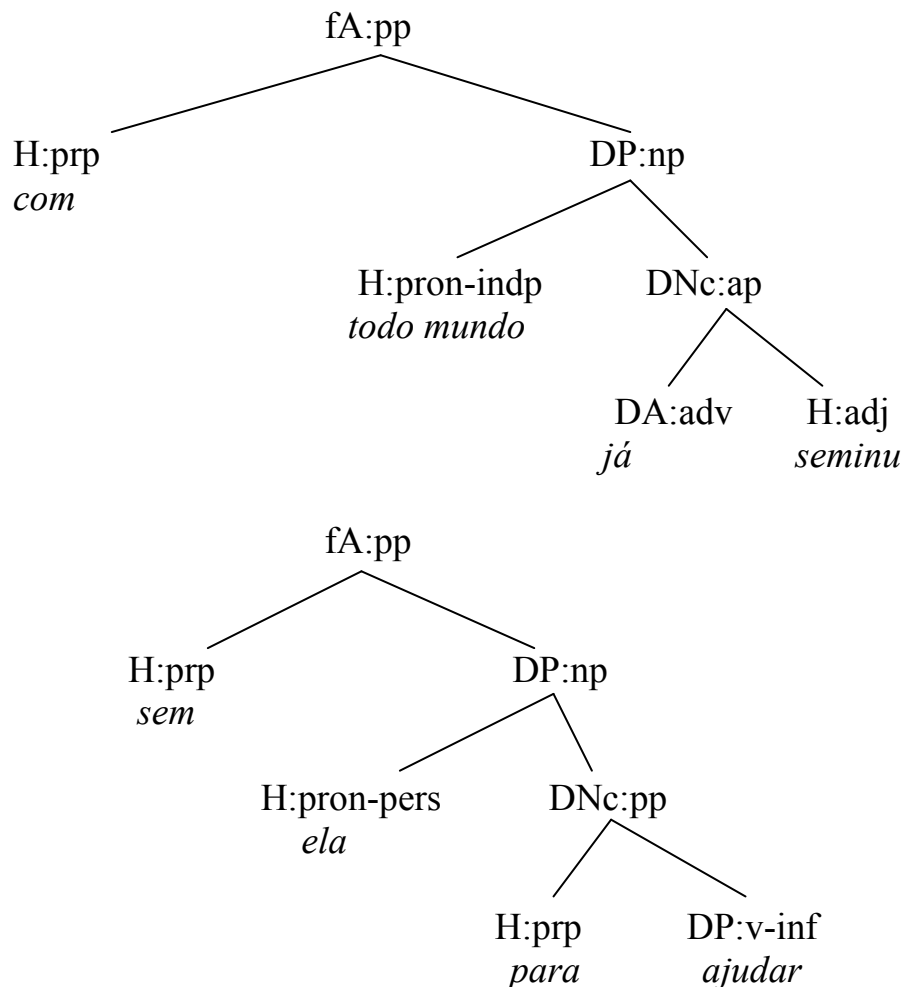
¹⁵ ... though one might defend a so-called "zero-constituent" consisting of a copula in gerund inflection: 'com o rosto [estando] na caixa pública', 'com todo mundo [estando] seminu'. Apart from 'estando' sounding quite awkward, one would need even two zero-constituents to handle the third case: 'sem ela [estando] [lá] para ajudar'. Therefore, as argued elsewhere in this text, we will here refrain from introducing zero constituents.

functions like S and Cs are exactly what is needed to build a predicating nexus without a predicator.

(a)



(b)



As a matter of fact, treating prepositions as more than “pp-headers”, as in (a), is not altogether uncommon. Particularly, few grammarians would treat prepositions in verb chains as heads of a pp, introducing tailor-made function categories like ‘infinitive marker’ instead. Another, maybe more consistent view, is to regard these cases as

subordinators, too, yielding the category of **verb chain subordinator** (SUBaux, as discussed in chapter 5).

There is a certain confusion as to the status of prepositions as a form or a function category, and one could argue that even the prototypical function of a preposition (as “pp-header” governing an np) is really one of subordinator (“SUBpp”). This “functional” view of the category ‘preposition’ explains why many grammars treat conjunctions (*que*) or relative adverbs (*como*) as “prepositions” if they head a comparandum with an np body: ‘*pior **que** isso*’, ‘*bela **como** a tia*’.

6.4. Pronoun phrases

Pronoun phrases can be divided into determiner phrases (detp) and independent pronoun phrases (pronp). Detp's are a subclass of ap's and the few determiner pronouns – possessives and quantifiers - that allow dependents, take modifiers of the intensifier/quantifier type, like adjp's and advp's:

Foram tão poucos os comunistas no país que nem conseguiram lançar um partido.

Agora, a casa era inteiramente sua.

Interestingly, detp's are usually formed with clause level function (Cs, S), not in the prototypical place of a determiner pronoun (prenominal DN).

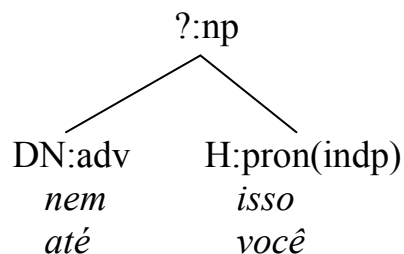
Pronp's are treated as a subclass of np's, and have the same functional register as other np's, but they are heavily restricted as to their choice of modifiers, allowing only "operator class adverbs"¹⁶, and – for personal pronouns - 'mesmo' and 'próprio':

ela mesma

até você

nem isso

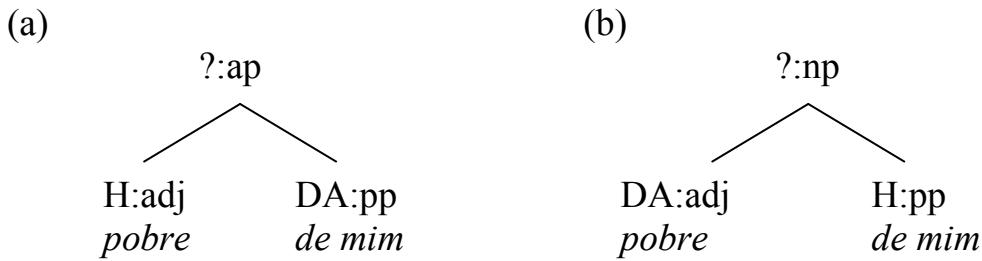
Using np terminology, we get the following type of analysis:



Note that "real" attributive adnominals for personal pronouns in Portuguese are circumvented by adding a 'de' which turns the *semantic* head of the constructions into the argument in a *syntactic* pp-dependent, as in: *pobre de mim*. The respective analysis (a) of the whole group as an ap ("poor of me-type") is, however, awkward on the clause level. Therefore, in order to preserve DA-status for *poor* ("poor me")¹⁷, an np-analysis (b) with a complex pp-head (*de mim*) might be preferable:

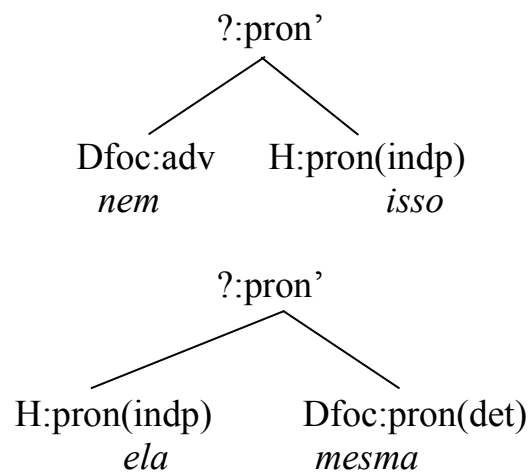
¹⁶ One could say that independent (uninflecting) pronouns already are *whole* – one word – np's, and since operator adverbs can modify whole np's, they are allowed, whereas articles, adjectives and determiner pronouns, that modify np-heads, are not allowed.

¹⁷ English allows direct premodification of a in this case, but case-marks the personal pronoun as accusative.



Further discussion:

One could be tempted to argue that the pronouns in these examples aren't really *modified*, but *focused* (as discussed in chapter 11 and 6.1), with the resulting constituent being a meta-word rather than a group:



We will not here pursue this line of thought any further, since the concept of multi-word “meta-words” is in conflict with the VISL-system’s general definition of words and groups.

Article groups, finally, are happily non-existent in Portuguese.

symbol	category	examples
H - D	head <-> dependent núcleo <-> dependente hoved <-> dependent	uma grande árvore sem dinheiro devagar demais
D DN DNmod DNarg >N, N<	adnominal adjunct adjeto adnominal adnominaladjekt (H: noun or pronoun)	o (1) seu (2) grande (3) carro novo (4) (modifiers) a (1) mulher do amigo (2) (modifiers) um tanto (modifier) cacique Jerônimo (modifier) Manoel Neto (1) da Silva (2) (modifiers) a proposta de lhe ajudar (argument) combinaram a venda da casa . (argument) predisposição para diabete (argument)
DNapp APP	(adnominal) apposition aposição (do substantivo) [epíteto de identidade] (nominal-) apposition	O grande cacique, Jerônimo , conhecia o seu país como mais ninguém.
DNc N<PRED	predicative adjunct adjeto predicativo [epíteto predicativo] preädikativadjekt	Jerônimo, um grande cacique , temia ninguém. com a mão na bolsa
DA DAmoD DAarg >A, A<	adverbial adjunct adjeto adverbial adverbialadjekt (H: adjective, adverb or determiner)	muito devagar (modifier) devagar demais (modifier) rico em ouro (argument) receoso de lhe ter ofendido (argument)
DAcom KOMP<	argument of comparative complemento comparativo komparativkomplement	é <u>mais</u> bonito do que um hipopótamo .
DP DParg DPmod P<, >P	argument of preposition argumento de preposição præpositionsargument [styrelse]	sem dinheiro nenhum (argument) quase sem dinheiro (modifier)

7. Clause types

Ordinary clauses *could* be regarded as a kind of group - big "verb phrases", with a verbal head governing clause level arguments and adjuncts, but here we will treat the term vp as the *form* category of complex predicators (i.e. verb chains with auxiliaries, cp. chapter 5).

Verb/predicator-containing clauses can be subdivided into **finite** (fcl) and **non-finite** (icl) clauses. In an **fcl**, the main verb (or the first auxiliary in a vp verb chain) is finite (i.e. tense-inflected), in an **icl** it is not. Non-finite clauses can be infinitive clauses, gerund clauses and participle clauses.

Clauses that are constituents of a larger syntactic unit (typically another clause or a pp), are called subclauses. In Portuguese, *all* finite subclauses are introduced and subordinated by a so-called complementizer (a conjunction, relative or interrogative), while non-finite subclauses usually are not.

Semantically, clauses can be described as **predications**, where something (the **predicate**) is predicated of something else (the **subject**). In syntactic terms, the relation between subject and predicate is called a **nexus**. In ordinary Portuguese clauses, the nexus-link between predicate and subject is mediated by a (verbal) **predicator**. Predicators are part of what is predicated, contributing between next to no content (copula verbs linking **predicatives**, e.g. *ser*, *estar*) or all of the content (intransitive verbs, e.g. *trabalhar*, *dormir*).

In the examples, subjects are in italics, predicates are underlined and predicators are in bold face:

Hipopótamo **come** muito. (transitive verb, predicator as part of predicate)

Ele **era** um herói nacional. (content-less copula predicating Cs predicative)

A criança **dormia**. (intransitive verb, predicate and predicator are identical)

It is a special feature of Portuguese (and most other Romance languages), that subjects are *optional* constituents, and can be incorporated into verbal inflexion endings. Therefore, one-word predications (a-d) or vp-predications (e), without a *syntactically* visible nexus, occur frequently¹⁸:

(a) Chegou.

(b) Chove.

(c) Começamos!

(d) Coma!

(e) Foi vencido.

Utterances like the above fit the form categories of either word (a-d) or group (e). However, since all 5 utterances are predications and feature predicators, it is tempting to also classify them as clauses. This, however, is in conflict with the first condition in our definition of a clause as (1) a *multi-constituent nexus* (2) featuring a predicator

¹⁸ For languages with obligatory subject, like English, only (d) [the imperative 'eat!'] would be problematic.

and/or a subordinator. The problem gets even worse if one reads enclitic or mesoclitic pronouns not as individual words, but as morphological parts of the verb. One solution is to make a distinction between the concepts of sentence and clause. A sentence, defined simply as the top node of *any* syntactic analysis, does allow v-only or vp-only predications, while a clause, with its multi-constituent condition, does not. Thus, the 5 predications above are sentences, but not clauses.

In the system advocated here, hyphenated enclitics will be regarded as syntactic constituents with their own branch in the syntactic tree, and in v-only or vp-only utterances the form-tag of clause (fcl) and the function tag of predicator (P) may be used optionally, creating an additional (non-branching!) node in the analysis:

UTT:fcl

 P:v-fin
chegou

UTT:fcl

P:vp

 AUX:v-fin MV:v-pcp
foi *vencido*

as opposed to a non-clausal analysis:

 UTT:v-fin
chegou

UTT:vp

 AUX:v-fin MV:v-pcp
foi *vencido*

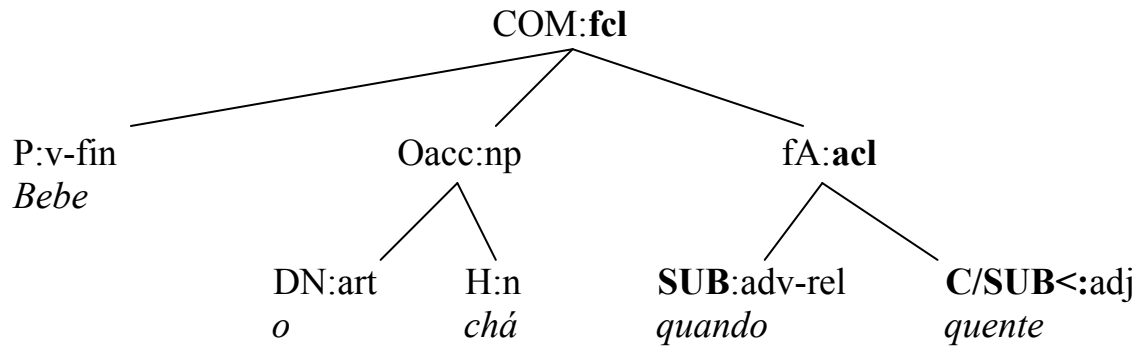
Now, predicating nexus-relations can be found in other than subject-predicator structures, too. Object predicatives (object complements, Co) or argument adverbials, for instance, can predicate something of a direct object (Oacc), *not* the subject – introducing a secondary nexus into the same clause, making double use of the clause’s predicator.

- (a) Pôs a arma no chão. (Oacc - Ao)
 (b) Chamou o projeto uma desgraça. (Oacc – Co)
 (c) Bebe o chá quente! (Oacc – fCo)

Sometimes, however, predications are subordinated by a **complementizer** (clause header) – and thus, isolated from the parent clause’s predicator - without providing an additional predicator. Here the concerning predication is a nexus between explicit and implicitly anaphoric material (the latter expressed in the parent clause), linked not by a predicator but by a subordinator.

Thus, (c) can be turned into a 2-clause construction by adding a subordinator:

(c')



Here, 'quente' is still predicated of 'chá', - the latter is implicitly present in the subordinated constituent, providing for an averbal nexus. We will call such subordinated verb-less constituents for **averbal (sub)clauses (acl)**. The acl's clause body (all but the subordinator) can be tagged with the dummy tag SUB< (argument of subordinator)¹⁹, but functionally it deserves a predicative tag C (or adjunct predicative, fC²⁰, since it predicates 'chá' without a copula).

For more discussion of clausality, see chapter 6.3. on pp's (com/sem as subordinator), chapter 5 on clause hierarchies in verb chains, and chapter 4 on subordination.

symbol		category	examples
cl	fcl, fs	finite (sub)clause oração finita finit (led)sætning	Não acredito que seja verdade
	icl, is	non-finite (sub)clause oração infinita infinit (led)sætning	Consertar um relógio não pode ser fácil
	acl, as	averbal (sub)clause oração averbal averbal (led)sætning	Ajudou onde possível

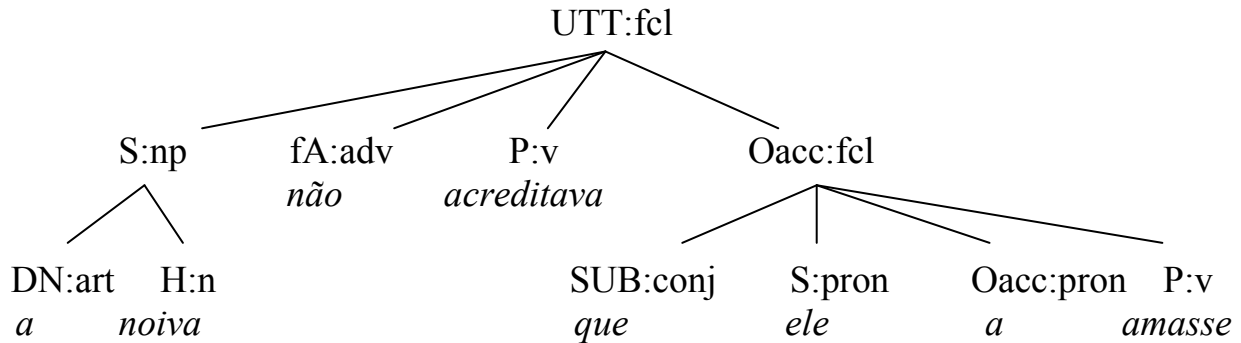
¹⁹ This implies, of course, viewing the complementizer-subordinator as *head*, governing the rest of the clause. This is analogous to a preposition head governing the rest of a pp (the 'argument of preposition', DP).

²⁰ Within the acl, the implicit 'chá' is subject (S), therefore, 'quente' is - strictly speaking - Cs or fCs in (c'), as compared to fC_o in (c).

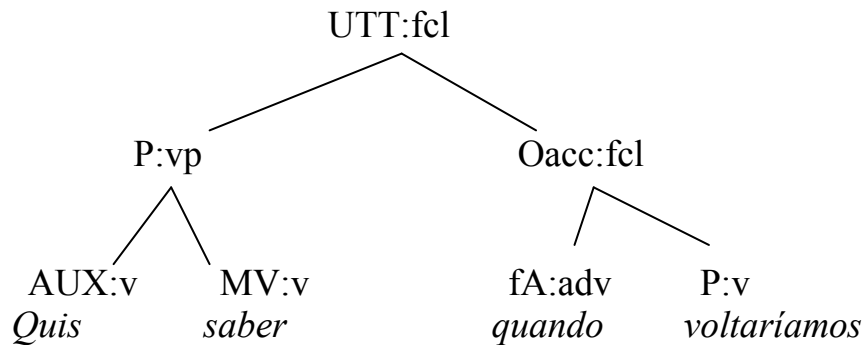
7. 1. Finite subclauses

Finite subclauses cover a wide range of constituent functions. Most "cognitive" verbs, for instance, allow or even demand a *que*-clause (a) or a finite interrogative subclause (b) as direct object:

(a)



(b)



Using a traditional - word class analogous - typology, one can distinguish between finite subclauses that substitute for nouns (nominal subclauses), adjectives (attributive subclauses) or adverbs (adverbial subclauses), respectively:

7.1.1. Nominal finite subclauses (S:fcl, O:fcl, C:fcl, DP:fcl)

with absolute relative pronoun or adverb:

Quem cedo madruga (S)

Molesta quem aparecer. (Oacc)

Seja quem for (Cs)

Mostrava a pedra a quem quisesse ver. (DP)

O pai não veio para o aniversário dele, o que não o surpreendeu. (fCsta)

A proposta de que ele venha para aqui não me parece realista. (DP)

with interrogative pronoun or adverb:

Perguntou quem lhe mandaria o presente. (Oacc)

Não sei quando ele chegou. (Oacc)

With the completive conjunction *que*:

Soube que foi o único candidato. (Oacc)

Só foi avisado depois que o seu jatinho levantou vôo. (DAarg/DP²¹)

Nem lhe parece estranho que o Pedro tenha comprado o sítio. (S)

Levou o projeto ao fim sem que ninguém lhe ajudasse. (DP)

7.1.2. Attributive finite subclauses (DN:fcl)

modifier function, with postnominal relative pronoun or adverb:

O homem que encontrei ontem (DN)

A amiga com a qual apareceu na festa (DN)

O ano quando se casaram ... (DN)

Note that the relative clauses in these examples are all restrictive, which is why there is no comma. So-called parenthetical relative clauses are surrounded by commas, the difference corresponding to the difference – in our terminology – between ordinary adnominal modifier (DN) and predicative adnominal (DNc):

O professor, que já não suportava o calor, terminou a aula cedo. (DNc)

argument function, with *se* or interrogative pronoun/adverb:

Não há informações se vão levar um processo contra o coronel. (DNc)

7.1.3. Adverbial finite subclauses (A:fcl)

adjunct function, with relative adverbial or subordinating conjunction:

João não fez nada para que ela voltasse. (fA, purpose)

Entraram na vila quando amanheceu. (fA, time)

Desliga, amor, que tem gente na linha! (fA, cause)

Faz como quiseres! (fA, manner)

argument function, with relative adverb:

Meu avô mora onde o mato começa. (As, argument adverbial)

²¹ The DA- or DP analysis depends on whether *depois* is regarded as an adverb or a preposition, respectively. A third option is, of course, to tag “depois_que” as a – complex – conjunctions, avoiding any analytic decision.

7.2. Non-finite subclauses (icl)

7.2.1. Infinitive subclauses

Infinitives make up for the "noun"-morphology of verbs. So infinitive-icl's are primarily used where nouns would be used, as subjects, objects, complements and arguments of prepositions, i.e. as what we in ch. 7.1.1 have called *nominal* subclauses.

Infinitive clauses as clause level argument:

- Retomar o controle** foi difícil. (S)*
- Manda o filho **comprar** leite. (Oacc, causative)*
- Viu o marido **bater na mulher**. (Oacc, perceptive "ACI")*
- Julgo o carro **ser caro demais**. (Oacc)*
- Não temos **onde morar**. (Oacc)*
- O problema é **não sermos bastante fortes**. (Cs)*
- Chama isso **fazer tábua rasa**. (Co)*

Infinitive clauses as argument in pp

- Era uma proposta difícil a **entender**. (DP)*
- Para **lhe ajudar**, propôs outra solução. (DP)*
- Para o amigo **lhe ajudar**, bastava uma palavra só. (DP)*
- Pede para **você ficar com ele**. (DP)*
- A idéia de **comprar** outro carro não foi nova (DP)*
- Levantou a pergunta de **onde abrir banca**. (DP)*

Both infinitives and que-clauses are very rare as direct arguments of nouns, and might simply be cases where a preposition has been "forgotten" ('de' in the last two examples).

Infinitive clauses as adjunct adverbial

- Veio **lhe agradecer** pessoalmente. (fA)*
- Foi à televisão **recitar** o documento. (fA)*

This construction is restricted to movement verbs with a valency allowing (direction) argument adverbials: *ir*, *vir*, *correr*, *apressar-se* etc.

7.2.2. Gerund subclauses

Gerunds account for the "adverb"-morphology of verbs. So gerund-icl's are primarily used where adverbs would be used, i.e. as adverbials (A) . Most common are adverbial *adjuncts* (1), while argument function is rare (2), apart from a special construction with 'ter'/'haver' (3):

- (i) **Gerund** clauses as adjunct adverbial:

*O novo governo acabou com a política isolacionista do anterior, **abrindo o mercado brasileiro para empresas multinacionais.*** (fA)

***Falando do João,** não quero convidá-lo.* (fA)

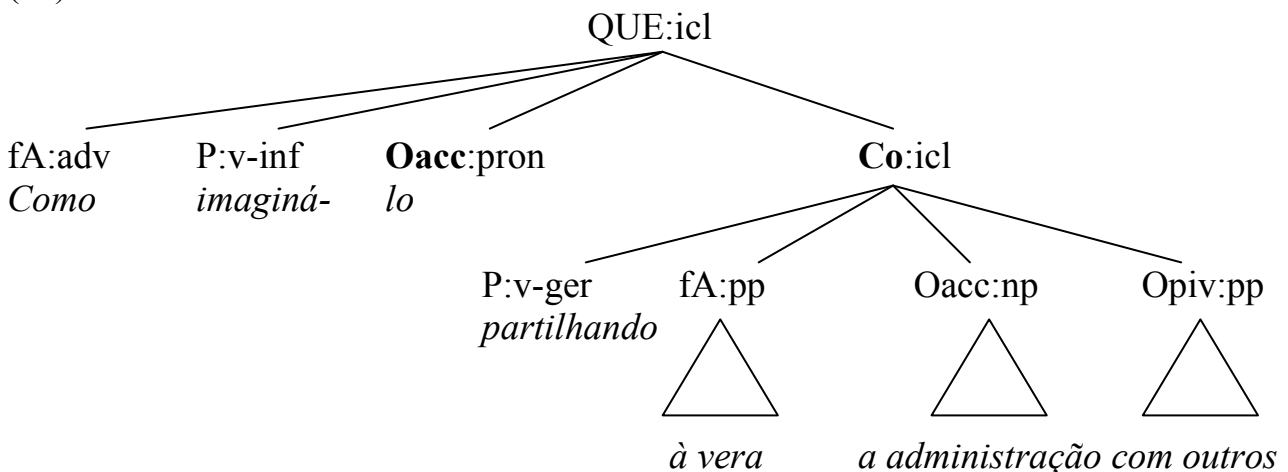
- (2) **Gerund** clauses as clause level argument ("accusative with gerund")

(2a) *Como imaginá-lo **partilhando** à vera a administração com outros?* (Oacc)

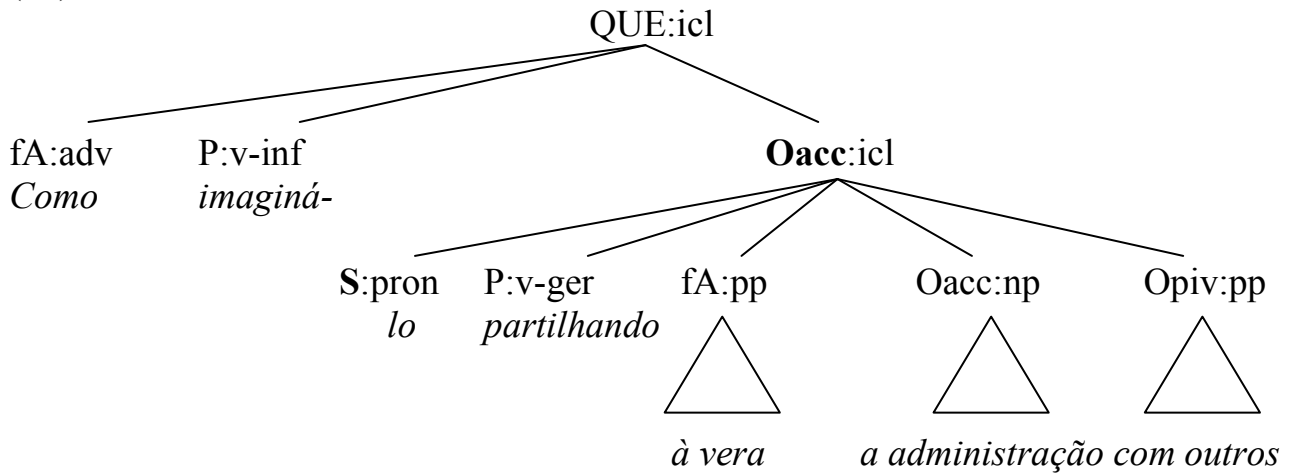
(2b) *Como imaginá-lo **partilhando** à vera a administração com outros?* (Co)

Argument gerund-icl's are restricted to so-called matrix verbs with a respective valency, reminiscent of the ACI-constructions discussed in chapter 7.4. Here, too, the "accusative" ('lo') can either be regarded as direct object of the main clause verb, or as subject of the subclause (gerund) verb. The latter reading yields an **Oacc:icl**-reading (2b) with a surface subject (the accusative pronoun) *within* the subclause, while the other provides for a **Co:icl**-reading (2a) of a gerund clause with *no* surface subject:

- (2a)



(2b)

(3) **Gerund** as argument of 'ter'/'haver':*Tem gente morrendo de fome no Brasil.* (Oacc)*Tem o motorista esperando.* (Oacc)

Sentences like these can be analysed as “accusative with gerund” constructions, too:

Tem	gente	morrendo	<u>de fome</u>	<u>no Brasil</u>
	<u>S:n</u>	<u>P:v-ger</u>	<u>fA:pp</u>	<u>fA:pp</u>
P:v-fin	Oacc:icl			

Especially in the second case, the gerund could also be read as a free object complement, as in the sentence ‘*Tem um amigo na casa*’:

Tem	o motorista	esperando.	Tem	um amigo	na casa
P:v-fin	Oacc:np	fCo:ger	P:v-fin	Oacc:np	fCo:pp

Finally, though not advocated here, the small gerund constituent of the last analysis could be seen as an – attributive - DN-dependent of a larger direct object np, as one would in the case of a relative clause (“*gente que morre de fome no Brasil*”):

Tem	gente	morrendo	<u>de fome</u>	<u>no Brasil</u>
		<u>P:v-ger</u>	<u>fA:pp</u>	<u>fA:pp</u>
	<u>H:n</u>	DN:icl		
P:v-fin	Oacc:np			

(4) **Gerund** with prepositional "complementizers":Another (fixed) clausal gerund construction occurs with the preposition *com* and *sem*. These two prepositions can function as a kind of "complementizer" in creating clause-like adverbials where the np that would ordinarily be the nominal argument of

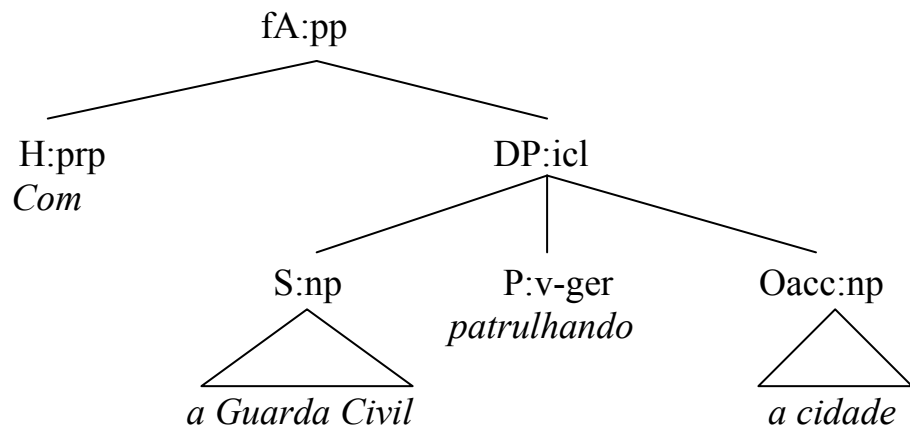
the preposition (DP), is made (“subject”-) part of a clausal nexus by gerund- pp- or ap- predicatives:

*Lançaram a novela **com um ator étnico estrelando.*** (DP)

***Com a Guarda Civil patrulhando** a cidade, não tinha onde se esconder.* (DP)

In a “DP with gerund reading”, like in the “accusative with gerund” construction (2), we seem to have two analysis options of different depths, one where the DP is regarded as one complete icl, and another one, where the gerund clause is smaller and read as a predicative. This would turn the DP into an acl with a subject and a subject complement (Cs or As), the latter consisting of a gerund icl. However, the “big icl” analysis (4a) is “flatter” and simpler than the acl analysis, and also supported by the fact that the gerund alternates with ‘a+INF’-constructions the same way gerund and ‘a+INF’ alternate after ‘estar’ – suggesting ‘estar’ as missing [zero-constituent] auxiliary of an ordinary predicator: *Com a Guarda Civil **a patrulhar** a cidade, ...*

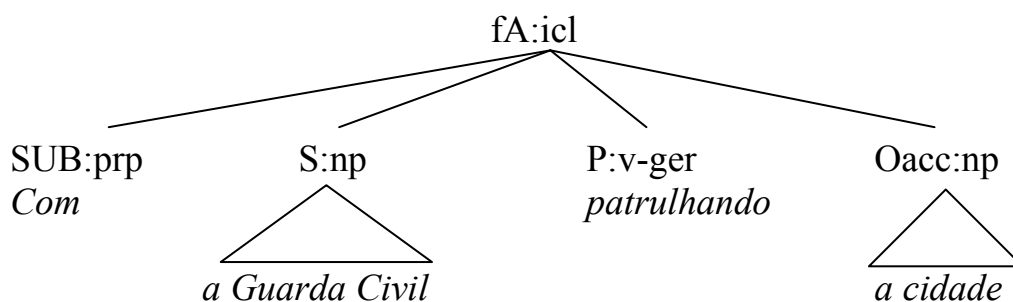
(4a)



A third reading, that of a postnominal gerund clause (DN:icl) is ruled out by a substitution test: ‘**Com a Guarda Civil, não tinha onde esconder-se*’ has a completely different meaning, and therefore, the gerund-icl cannot be part of an np with ‘[a] *Guarda Civil*’ as head.

Finally, the preposition can be regarded as a subordinator in an even larger gerund-icl, amounting to a flat clausal analysis for the whole adverbial, without a pp- or DP-constituent. The prp-subordinated gerund-icl is consistent with similar analyses for other (non-gerund) clause bodies (cp. Chapter 6.3):

(4b)



7.2.3. Participle subclauses

Participles are the "adjective" variant of verbal morphology. In Portuguese, only past participles are productive, the original present participle endings '-ante', '-ente' and '-inte' having been degraded to affix status. Attributively used past participles ('-ado' and '-ido') are inflected for gender and number, like adjectives, and the prototypical (inflecting) participle-constructions occur, like adjectives, primarily as postnominal modifiers (DN) and predicatives (Cs, Co, fC, DNc). Another, "verbal", use of participles is in verb chains after 'ter' (expressing tense), where there is no inflection. Finally, participles occur in *ablativus absolutus* constructions as pivot of a type of adverbial subclause.

7.2.3.1. Attributive participles

Attributive participles can completely turn into adjectives, and form ap's taking intensifier modifiers. Dictionaries usually list these participles individually as adjectives, and if used without heavy pp-dependents, ap-analyses are just fine (cp. chapter 6.2):

carros **usados/velhos**

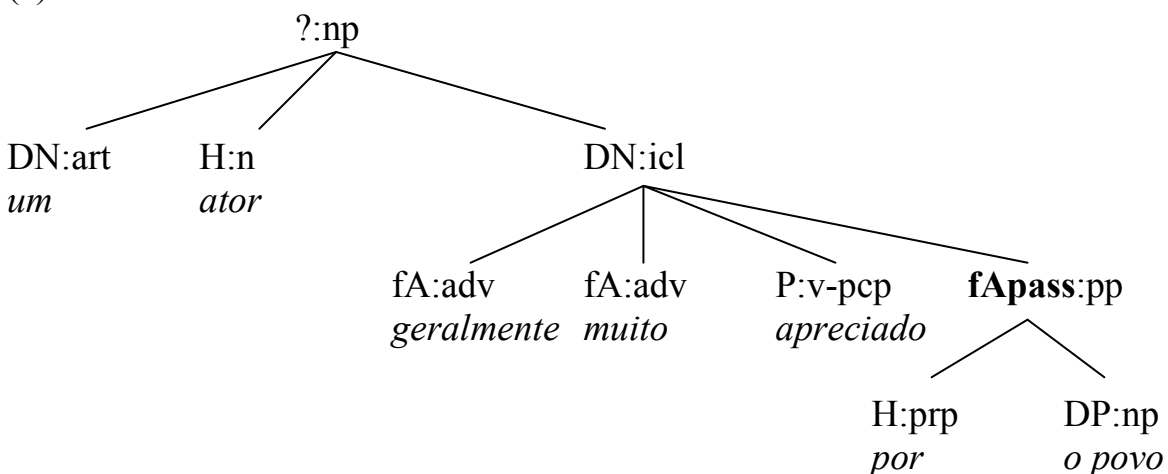
H:n DN:v-pcp/adj
np

uma casa **muito aconchegada/confortável**

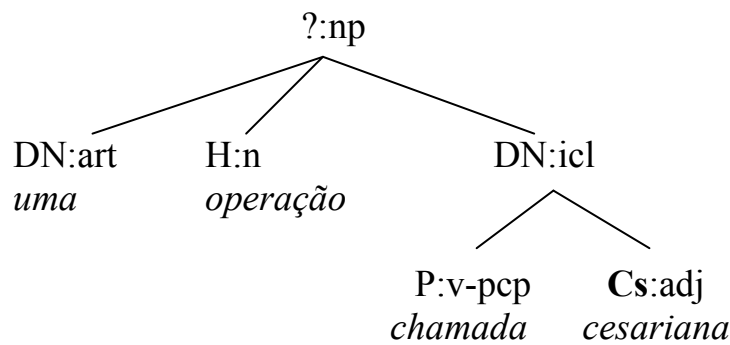
DN:art H:n DA:adv H:v-pcp/adj
DN:ap
np

However, if more dependents – or even arguments - are added, an icl-analysis seems more and more natural. One advantage is, that the parent-verb's valency structure - and with it, clause level dependent terminology – can be borrowed.

(a)



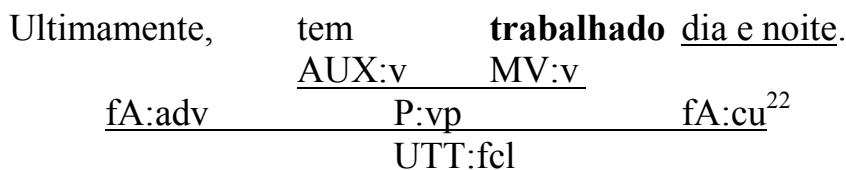
(b)



Note that the participle-icl's in (a) and (b) are passive clauses, and that the concerning arguments from the active clauses have received a new *syntactic* function (though not a new semantic role). Thus, the subject (S) of 'o povo geralmente muito o aprecia' becomes an agent of passive (fApass) in (a), and the *object* complement (Co) of 'chamam a operação **cesariana**' becomes *subject* complement in (b). By contrast, *adjunct adverbials* ('geralmente', 'muito') retain their syntactic function label in the passive clause.

7.2.3.2. Participles in verb chains

Uninflected past participles are used after 'ter' to form the *perfeito composto* and *mais-que-perfeito composto* tenses:



Participles also occur in two types of passive verb chains, "action passive" (after 'ser') and "state passive" (after 'estar'). In both cases the participle has inflection agreement with the subject. Participles in action passives (a) are more verb-like, an agent of passive (the original subject in the active clause) can be added (fApass), and the participles cannot be modified by DA-only-modifiers²³ like 'nada'. Participles in state passives (b) *can* be modified by DA-only-modifiers like 'nada', and adding an agent of passive seems odd. Therefore, we will tag participles in action-passives as main verb (MV:v-pcp) in a complex predicator (P:vp), while participles in state-passives will be assigned the "adjectival" function of subject complement (Cs:v-pcp), or - if part of a group – head function in a Cs:ap.

²² Compound units (cu) will be explained in chapter 8.

²³ 'nada', used as intensifier can only adverbially modify ap-heads, not verbs, - unlike 'muito' which does also occur as adjunct adverbial at clause level (fA), and therefore is of no use in our "adjectivity" test for participles.

(a)

Uma	hipopótama	branca	foi	(*nada) vista	(por um turista)
A	grande	porta	foi	(*nada) fechada	(por um turista)
<u>DN:art</u>	<u>H:n</u>	<u>DN:adj</u>	<u>AUX:v</u>	<u>?</u>	<u>MV:v</u>
<u>S:np</u>			<u>P:vp</u>		<u>fApass:pp</u>
UTT:fcl					

(b)

A	hipopótama	branca	estava	(nada) cansada	(*por um turista)
A	grande	porta	estava	(nada) fechada	(*por um turista)
<u>DN:art</u>	<u>H:n</u>	<u>DN:adj</u>		<u>DA:pron</u>	<u>H:v-pcp</u>
<u>S:np</u>			<u>P:v</u>	<u>Cs:ap</u>	
UTT:fcl					

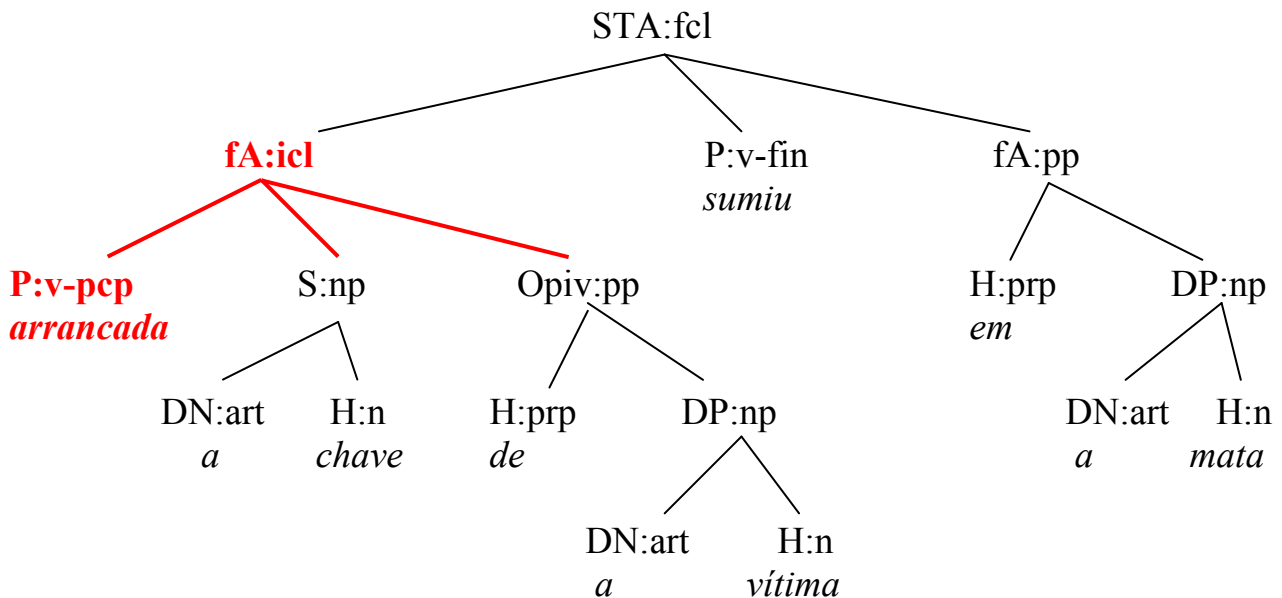
A verb's valency determines in which verb chains its participle can be used. Transitive verbs with agent subjects and patient objects (*abrir, fechar, comer*) can be used both after 'ter', 'ser' and 'estar', ergative verbs with patient subjects without objects (*chegar, desaparecer, nascer*) only after 'ter' and 'estar', and intransitive verbs with agent subjects without objects (*trabalhar, rir, brincar*) only after 'ter'. A semantic explanation is that verbs without a patient-argument (inergative intransitives) logically can't form any passive, while only verbs with both a patient- and an agent-argument (transitives) can form action-passives.

	ter + MV:v-pcp	estar + Cs:v-pcp	ser + MV:v-pcp
transitive Sagent + Opatient	+	+	+
ergative Spatient	+	+	
intransitive Sagent	+		

7.2.3.3. Ablativus absolutus

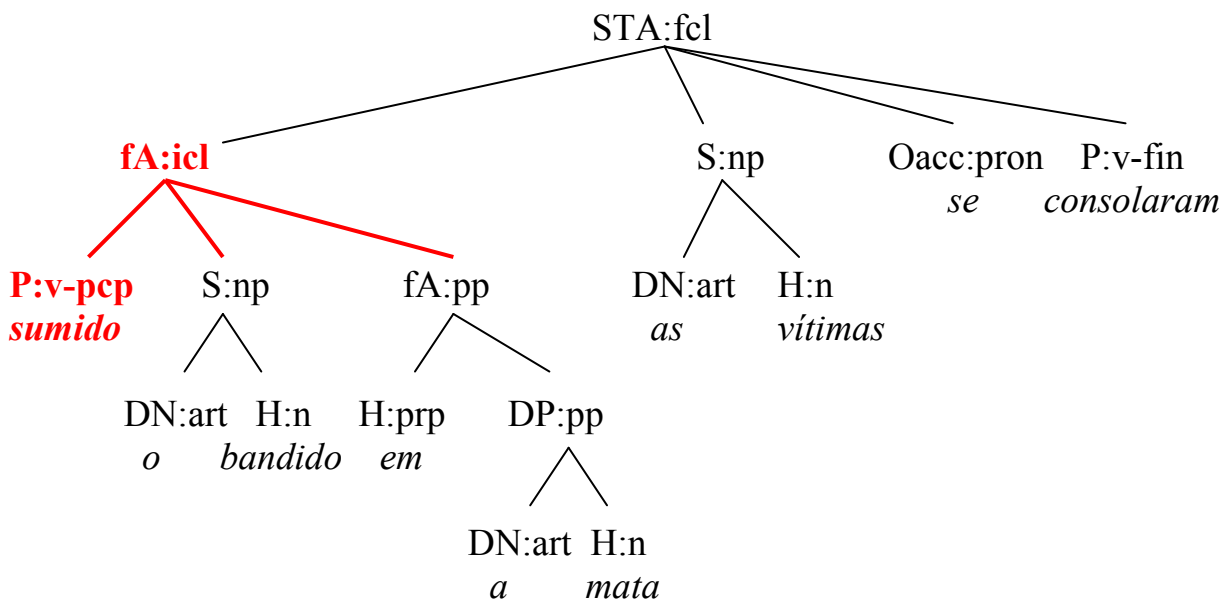
'Ablativus absolutus' (the term used for Latin) or 'absolute participle constructions' are adjunct adverbial clauses featuring an inflecting past participle as predicator and a *patient* subject. Like in state-passives (cp. 7.2.3.2), only transitive and ergative verbs qualify for this construction, since only they have *patient* arguments. If the ablativus absolutus is "unfolded" into a finite active clause, its *patient* subject becomes direct object (Oacc) for transitive verbs (a), but remains subject (S) for ergative verbs (b).

- (a)
- arrancada a chave (S) da vítima, sumiu na mata**
 --> arrancou a chave (Oacc) da vítima, e sumiu na mata



(b)

sumido o bandido (S) na mata, as vítimas se consolaram
 --> o bandido (S) sumiu na mata, e as vítimas se consolaram



Absolute participles must not be confused with sentence initial participle ap's (or – if preferred – participle *clauses*). The latter function as adjunct *predicatives* (fC) , the former as adjunct *adverbials* (fA). Predicative participle clauses (b) have the same subject as the main clause, and inflect accordingly. Absolute participle clauses (a) have their own explicit subject, and no agreement with the subject of the main clause.

(c)

pintados os sete quadros, o grande mestre se retirou.
 P:v-pcp S:np
 fA:icl S:np Oacc:pron P:v-fin
 STA:fcl

(d)

pintada no século quinze, a obra era opulenta e cheia de formas redondas.

H/P:v-pcp

DAa:pp

fC:ap/icl

S:np P:v-fin

Cs:cu

STA:fcl

7.3. Averbial clauses (acl)

In our terminology of Portuguese syntax, averbal (sub)clauses consist of a subordinator (or complementizer) and a clause body featuring one or more clause level constituents, but *no* predicator (which would make the clause an fcl or icl). As a dummy function tag for the clause body, the tag SUB< (subordinator argument) is used.

- | | | | | |
|------|---------------|----------------------------|------------|---------------|
| (a1) | Quando | doente, | bebe | vinho quente. |
| (a2) | Quando | criança, | (já) bebia | vinho quente. |
| (a3) | Quando | cansado, | bebe | vinho quente. |
| | <u>fA:adv</u> | <u>SUB<:adj/n/v-pcp</u> | <u>H:n</u> | <u>DN:adj</u> |
| | | fA: acl | P:v-fin | Oacc:np |

In the example (a), the subordinator is a relative adverb, which has its own in-clause function (fA) on top of the subordinator function – which is why no SUB-tag is used. Conjunctions, on the other hand, are pure subordinators:

- | | | | | |
|-----|-----------------|--------------------|---------|----------------------|
| (b) | Embora | doente, | bebe | <u>vinho quente.</u> |
| | <u>SUB:conj</u> | <u>SUB<:adj</u> | | |
| | | fC/Cs:adj | | |
| | | fA: acl | P:v-fin | Oacc:np |

In most cases, the acl clause-body has predicative function, and in (a/b) SUB< could be replaced by a more functional Cs ('quando [está] doente', 'embora [esteja] doente'), or – if one doesn't want to think of a zero-constituent copula – fC (adjunct predicative).

It is due to this "predicativeness" that the participle in (a3) is not treated as a predicator, but analogously with 'doente' (a1) and 'criança' (a2). Cp. also the predicative participle discussion in chapter 7.2.3.4.

Gerunds, too, can be used predicatively in acl's:

- | | | | | |
|-----|-----------------|----------------------|---------|----------------------|
| (c) | Embora | morrendo, | bebe | <u>vinho quente.</u> |
| | <u>SUB:conj</u> | <u>SUB<:v-ger</u> | | |
| | | fC/Cs:v-ger | | |
| | | fA: acl | P:v-gin | Oacc:np |

Using the acl-analysis, and not counting 'morrendo'/'cansado' as predicators, is a useful way of distinguishing between (c) and (c'), which would otherwise receive the same analysis (P & icl):

- | | | | | |
|------|-----------------|----------------|---------|----------------------|
| (c') | Embora | morra, | bebe | <u>vinho quente.</u> |
| | <u>SUB:conj</u> | <u>P:v-fin</u> | | |
| | | fA: fcl | P:v-fin | Oacc:np |

Some relatives ('como', 'quanto', 'qual') and the conjunctions 'que' and 'do_que' can function as comparative subordinators (SUBcom) and introduce comparative acl's, both as clause (d1) and group (d2) constituents.

(d1) **Como** [é] sempre, só concorreram candidatos filiados ao Partido Comunista.
SUBcom:adv fA:adv

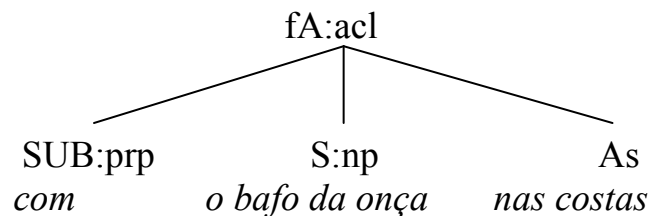
fA:acl fA:adv P:v-fin S:np
STA:fcl

(d2) Mulheres **como** [são] as de hoje não querem trabalhar em casa.
SUBcom:adv S:np

H:n DN:acl S:np fA:adv P:vp fA:pp
STA:fcl

In both acl's, the clause body tag SUB< has been replaced by more functional tags, fA (adjunct adverbial) in (d1) and S (subject) in (d2), respectively. Such tags are, however, controversial, since they depend on which "zero constituents" and thus, on what kind of "unfolded" clause structure one imagines.

With a third kind of subordinator, prepositions, the acl analysis also suggests itself as an alternative solution for those special pp's – headed by 'com' or 'sem' – that contain predications (discussed in chapter 6.3.):



Finally, acl's may come handy in the top-level analysis of certain averbal utterances that nevertheless feature a kind of clausal nexus. So far, we have been discussing *subordinated* averbal clauses only, and here - in Portuguese - complementizers (conjunctions, relatives or prepositions) are obligatory, as we assumed in our definition of acl's. But what about averbal *main clauses*, as they occur in, for instance, exclamations and headlines:

Portugal aos portugueses!

Oacc Opiv
EXC:acl

dez votos a menos!

Oacc fA
EXC:acl

Um russo em Chicago

S:np As:pp
UTT:acl

7.4. ACI and causatives (transobjective constructions)

Like other Romance or Germanic languages, Portuguese features some so-called matrix verbs that govern infinitive-subclauses with independent subjects (i.e. different from the matrix clause's) that take not nominative case, but *accusative* (or, in some cases, *dative*) form. Thus, what semantically represents the subclause subject is morphologically marked as *object* in the main clause (matrix clause). This can syntactically be interpreted in two obvious ways: (1) Either the surface constituent in question is really *subject of the subclause*, but bears a morphological case mark for the whole (object) subclause. (2) Or the surface constituent is really *object of the matrix clause*, and the subclause functions as object complement, with its own subject anaphoric and unexpressed at surface level.

In order to force case on Portuguese nominal constituents, pronoun substitution is useful, as in the following examples of infinitive clause candidates for direct object function:

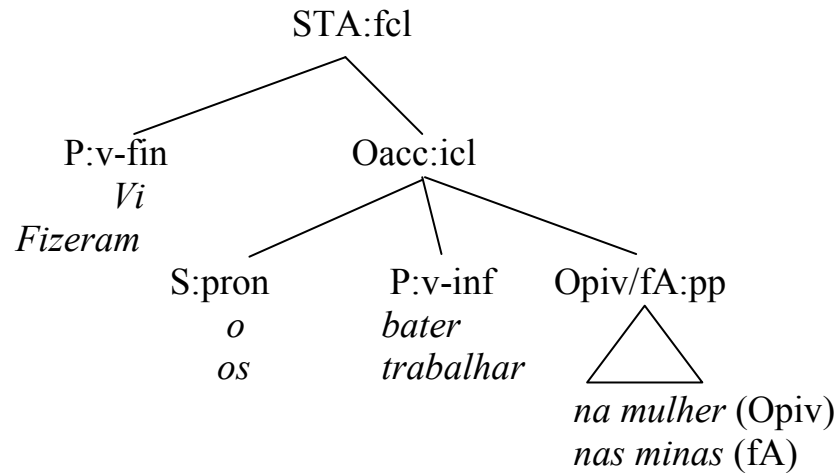
Não deve <u>contar isso</u> . Não o deve.	(auxiliary with AUX< complement)
Julgo (eles) <u>serem inocentes</u> .	(main verb with Oacc argument)
Vi- o <u>bater na mulher</u> .	(sense-verb with ACI construction)
Fizeram- nos <u>trabalhar nas minas</u> .	(causative construction with accusative)
Permitiu- lhe <u>usar o nome da empresa</u> .	(causative construction with dative)

(a) is the prototypical auxiliary complement case, with the two verbs' subjects coinciding and – as a verb chain test - pronoun fronting of the second verb's object left of the first verb: 'Não o deve contar.'²⁴ (b) is the typical main verb case, with an independent nominative subject in a direct object subclause. The difference can be shown either in form (vp vs. icl constituent), or in function (AUX vs. MV and AUX< vs. Oacc function), as described in the chapter on verbal constituents (ch. 5).

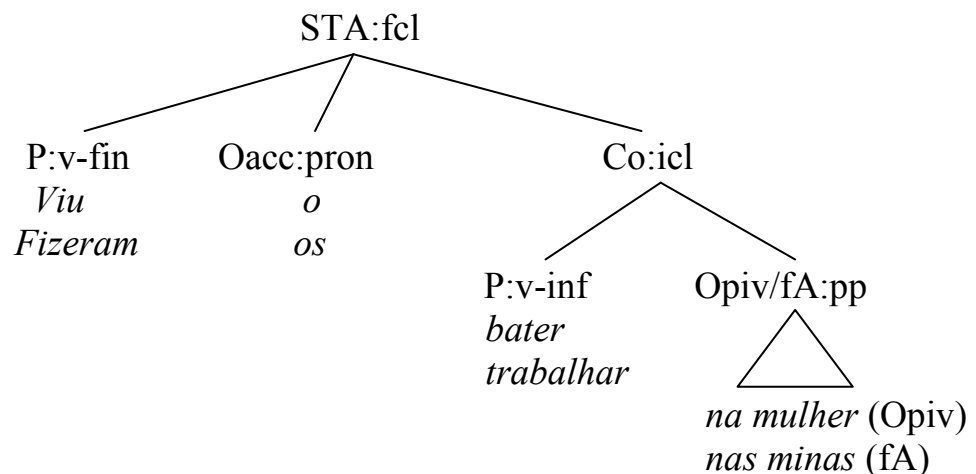
The transobjective construction in (c-e) are more problematic: The two verb's subjects differ, and the second verb's object can't be pronoun-fronted (*'a vi-o bater'), suggesting an analysis with two main verbs, as in (b). On the other hand, the second verb's subject is marked as object of the first, it is hyphen-linked to the "wrong" verb, and even "frontable" ('o vi bater na mulher').

(c) is what in Latin is known as *accusative cum infinitive (ACI)*, and is restricted to sense-verbs: *ver*, *ouvir*, *sentir*. (d) is called a causative construction: X causes (Y do/happen). Also causatives constitute a restricted class: *fazer*, *deixar*, *mandar*. Analysing (c) and (d) the same way as (b), we get:

²⁴ Note that the accusative pronoun in *não o deve* refers to the whole auxiliary complement ('contar isso'), while the accusative pronoun in the object fronting test *não o deve contar* refers to the direct object ('isso') within the complement clause.



An argument in favor of the Oacc:icl constituent is that it can be replaced by an ordinary Oacc:fcl, like in the non-matrix-cases (b): *Vi que ele batia na mulher. Fizeram que eles trabalhassem nas minas*. This does, however, involve a change from accusative to nominative case for the pronoun, and we could try another analysis, that gives full (syntactic) credit to morphological form:



In this analysis, the accusative pronoun functions as direct object in the matrix clause, and the subclause functions as object complement.

In similar cases, with a pp or ap object complement governed by a sense-verb or a causative verb, this second analysis has the additional advantage of not needing to introduce an averbal subclause without a complementizer or predicator. Compare:

(1) Object complement analysis:

Vi-	o	<u>com a mulher.</u>	Deixaram-	no	sozinho
P:v-fin	Oacc:pron	Co:pp	P:v-fin	Oacc:pron(acc)	Co:adj

(2) Averbale clause analysis:

Vi-	o	<u>com a mulher.</u>	Deixaram-	no	sozinho
	S:pron	Cs/fC:pp		S:pron(acc)	Cs/fC:adj
P:v-fin	Oacc:acl		P:v-fin	Oacc:acl	

On the other hand, there seems to be a syntactic difference between ACI's (c) and causatives (d) in that the object subclause can be substituted by the accusative pronoun alone in (c), but not in (d) – though even in (c) this is *semantically* problematic.

(c') Vi-a bater no marido. – Vi-a.

(d') Fizeram/deixaram-nos trabalhar nas minas. - *Fizeram/deixaram-nos.

This suggests that the Co:icl analysis fits ACI's better, since it assigns the pronoun Oacc function in the first place – while the Oacc:icl analysis yields a better fit for causatives. If I see somebody hit her husband this implies I see her, while making somebody work does not imply making him (like one makes, for instance, a tool or cake). With 'deixar' even the choice of verb changes in the English translation: *Letting* someone work as opposed to *leaving* someone. And it is this second reading of causatives we get with prototypical "predicative material", pp's, adjectives or adverbs:

Fizeram-na famosa.

(They made her famous.)

Deixaram-no sozinho/em casa/sem comida.

(They left him alone/at home/without food.)

Thus, for the two causatives mentioned, if we choose the Oacc:fcl analysis for the 'make/let' meaning, and the Co:pp/adj reading for the 'make/leave' meaning, we now have a syntactic tool to distinguish between these two cases. However, while 'fazer' only allows Co-predicatives, both 'deixar' and the ACI sense-verbs permit Ao-predicatives ('deixaram-no *lá*.', 'vi-o *aqui*').

A third causative, the order-verb 'mandar', behaves even more like ACI-verbs: the pronoun substitution test (c'-d') is positive, and Co-readings aren't even causative:

(1) O rei mandou um soldado chamar a rainha. – O rei mandou o soldado.

(2) O rei mandou o soldado sem armas. (Co)

(3) O rei mandou o soldado à rainha. (Ao)

The causative effect is stronger in (3) than in (2), since the soldier in (2) *is* without arms, he does not *become* without arms, whereas the soldier in (3) does end up *with the queen*. Therefore, 'um soldado' in (1) could well be tagged as direct object (Oacc) followed by an icl object predicative. But which kind of object predicative, nominal (Co) as in (2), or adverbial (Ao) as in (3)? For ACI-verbs one can imagine neutrally sensing (for instance, watching) somebody who does something:

Bate na mulher. Vejo isso. -> Vejo-o bater na mulher.

This doesn't work with 'mandar':

O soldado chama a rainha. O rei manda o soldado.

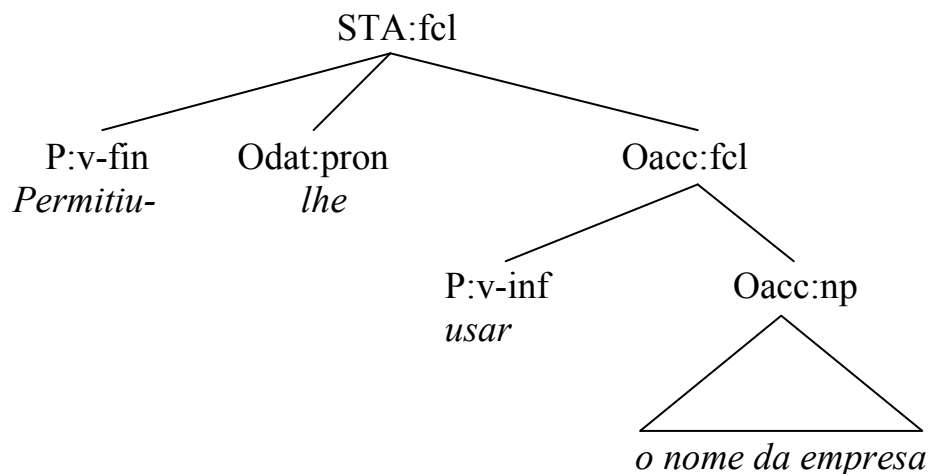
Rather, as a cause-effect sequence the opposite is true: calling the queen is the purpose of sending the soldier, and a purpose subclause should be analysed consistently as adverbial no matter whether there is a causative matrix clause (2) or not.

- (1) Os amigos vieram ajudar na colheita.
 S:np P:v-fin fA:icl
- (2) O rei mandou um soldado chamar a rainha.
 S:np P:v-fin Oacc:np Ao:icl
- (3) O rei mandou um soldado para que chamasse a rainha.
 S:np P:v-fin Oacc:np Ao:fcl

A third group of transobjective constructions are causatives that govern dative objects (e). Due to the case difference, it is even less satisfying to view the dative in these cases as subject of a direct object clause:

- (e) Permitted-lhe usar o nome da empresa.
 S:pron(dat) P:v-inf Oacc:np
 P:v-fin Oacc:fcl

Rather, one could use the same clause level functions (Odat/Opiv and Oacc) that appear in the concerning verbs' valency slots when filled with nominal material: *permitir-proibir-aconselhar ac. a alg.:*



Transobjective constructions can occur even without the mediating accusative (or dative):

<u>O rei</u>	mandou	chamar	<u>a rainha.</u>
		<u>P:v-inf</u>	<u>Oacc:np</u>
<u>S:np</u>	<u>P:v-fin</u>		<u>Oacc:icl</u>

Ouvi	falar	muito	<u>do senhor.</u>
	<u>P:v-inf</u>	<u>Oacc:pron</u>	<u>Opiv:pp</u>
<u>P:v-fin</u>		<u>Oacc:icl</u>	

Proibiu	viajar	<u>para o exterior.</u>
	<u>P:v-inf</u>	<u>fA:pp</u>
<u>P:v-fin</u>		<u>Oacc:icl</u>

If the “accusative” or “dative” is an np, not a pronoun, it can also appear to the right of the subclause predicator. This happens especially when the subclause main verb is ergative (i.e. governs a patient subject), since these verbs have a tendency to allow VO order:

<u>O rei</u>	mandou	entrar	<u>o soldado.</u>
<u>S:np</u>	<u>P:v-fin</u>	<u>Ao:v-inf</u>	<u>Oacc:np</u>

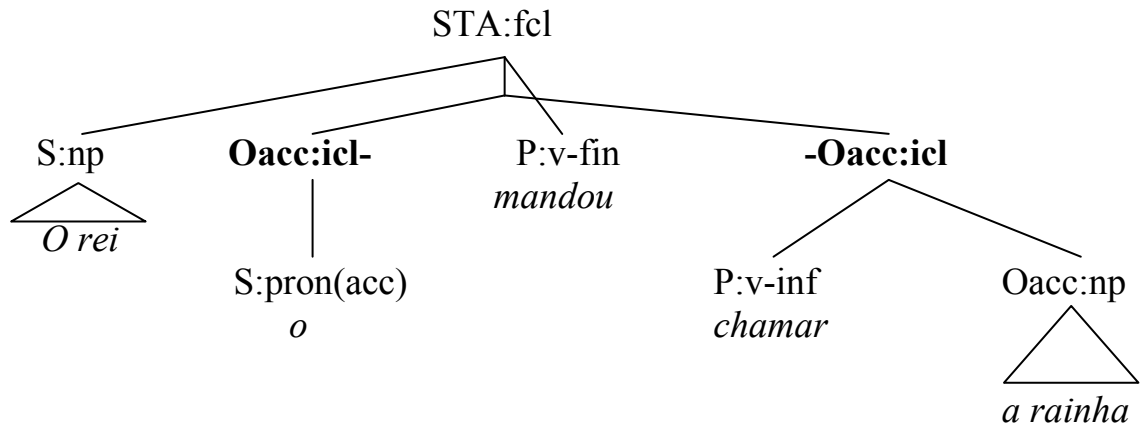
Mediator pronouns, on the other hand, can *precede* the matrix verb:

O rei	o	mandou	entrar.
			chamar a rainha.
<u>S:np</u>	<u>Oacc:pron</u>	<u>P:v-fin</u>	<u>Ao:v-inf/icl</u>

In fact, pronoun fronting is a *notational* argument for not choosing an Oacc:icl analysis in transobjective constructions, since this would result in an accusative/dative subject to the left of a predicator whose subject it is *not*, a fact that in CG notation could be marked by a double dependency arrow:

O	rei	o	mandou	chamar	a	rainha.
>N	SUBJ>	SUBJ>>	MV	ICL-<ACC	>N	<ACC

Also, the concerning syntactic tree would involve an (avoidable) disjunct constituent:



Exercises:

- 7.4-1. Do quarto, ouvi os outros saírem da casa.
- 7.4-2. O rei mandou chamar os assaltantes.
- 7.4-3. O rei mandou o delegado chamar os assaltantes.
- 7.4-4. O rei mandou entrar os assaltantes.

8. Co-ordination

A constituent that consists of 2 or more co-ordinated constituents, is called a *paratagma* or, with an English expression, **co-ordinated unit** (*cu*) 'cu' is a form category, like word, group and clause. Usually, co-ordinated constituents have the same form, i.e. 2 np's, 2 adjectives, 2 predicators etc., and are co-ordinated by 1 or more **co-ordinators** (*CO*). Coordinator function is usually filled by co-ordinating conjunctions (conj-c: 'e', 'ou', 'mas'), but punctuation (commas, slashes) – if allowed in the tagging scheme – can also do the job. The individual co-ordinated constituents are assigned the dummy function of **conjunct** (*CJT*) with regard to their mother constituent, the *cu*, and their "real" outward function is lost to the *cu*, which "represents" them on the next higher syntactic level. Thus, in a constituent grammar analysis of the sentence

'cobaias , *coelhos* e *ratos* são mamíferos como nós.'

CJT:n CO:pu CJT:n CO:conj-c CJT:n
S:cu

it is not the conjuncts (in italics), that function as subjects, but the co-ordinated unit as a whole (underlined). Note that 'e' and the comma both fulfil the same function (CO).

Not only words, but groups and clauses can be co-ordinated, too, and in principle, any combination of forms is possible:

Veio, *viu*, *mas* *não* *venceu*.

P:v-fin P:v-fin fA:adv P:v-fin
CJT:fcl CJT:fcl CO:conj-c CJT:fcl
UTT:cu

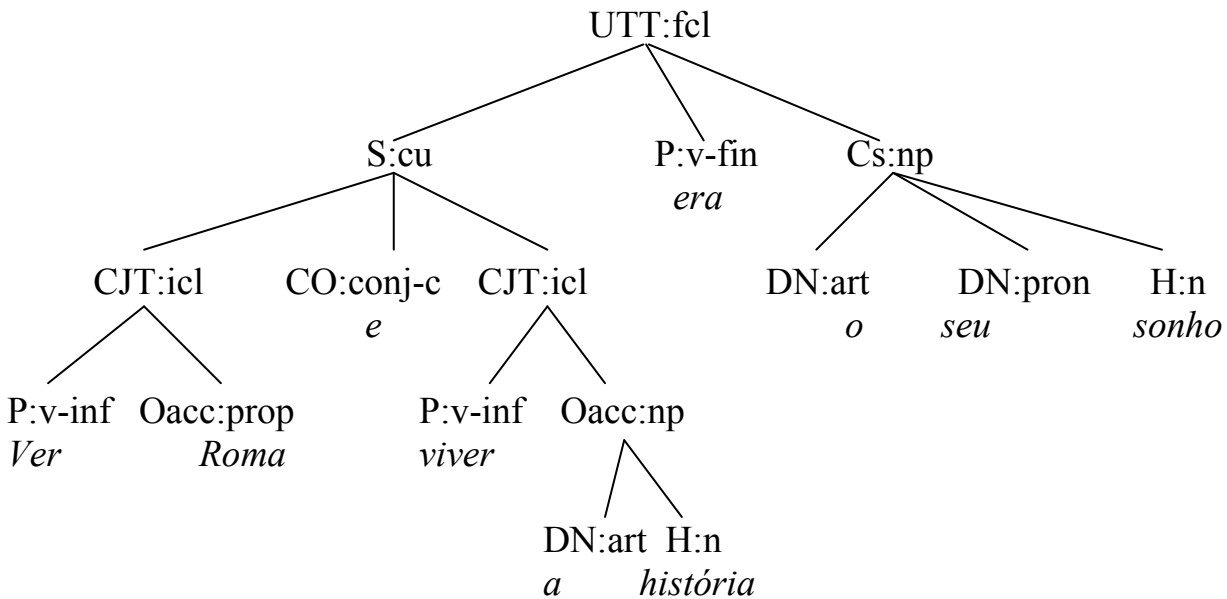
Note that the first two conjuncts could also have been tagged as words (CJT:v-fin), not clauses, without disturbing the conjunction mechanism, since conjuncts need not share the same form.

Lançaram uma revista *de* *e* *sobre* *crianças*.

CJT:prp CO:conj-c CJT:prp
H:cu DP:n
DN:art H:n DN:pp
P:v-fin Oacc:np
UTT:fcl

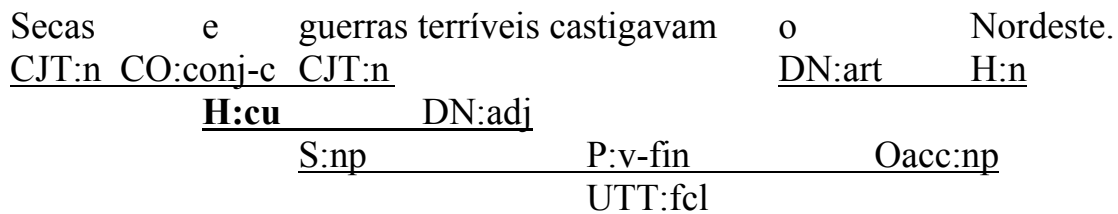
Note that the pp 'de e sobre crianças' does not have a simple preposition as head, but a compound unit consisting of co-ordinated prepositions. Since we have so far defined groups by prototypical *head forms* (and prototypical dependent *functions*), we must now widen this definition accordingly, providing for complex *head cu's*

with prototypical head forms as conjuncts. In doing so we gain the notational bonus of not needing a zero constituent DP (italicized) after 'de' only to create matching pp-conjuncts ('*de crianças e sobre crianças*').

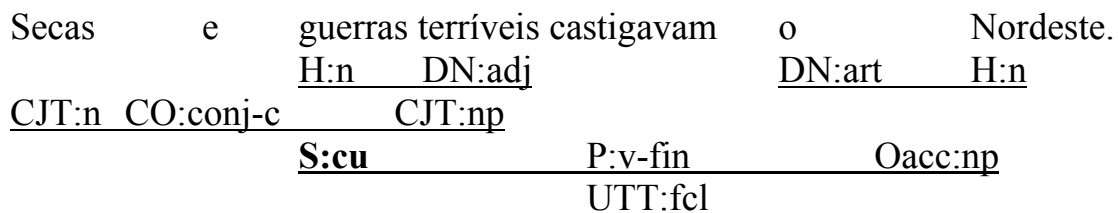


Co-ordination is one of the possible causes of syntactic ambiguity. For example, postnominal adjectives may be attached *before* or *after* co-ordination, as in the following case of true ambiguity:

(a)

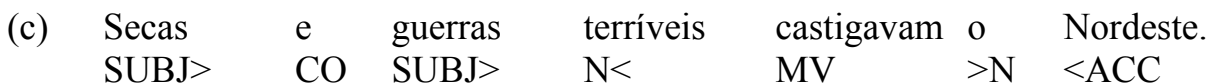


(b)



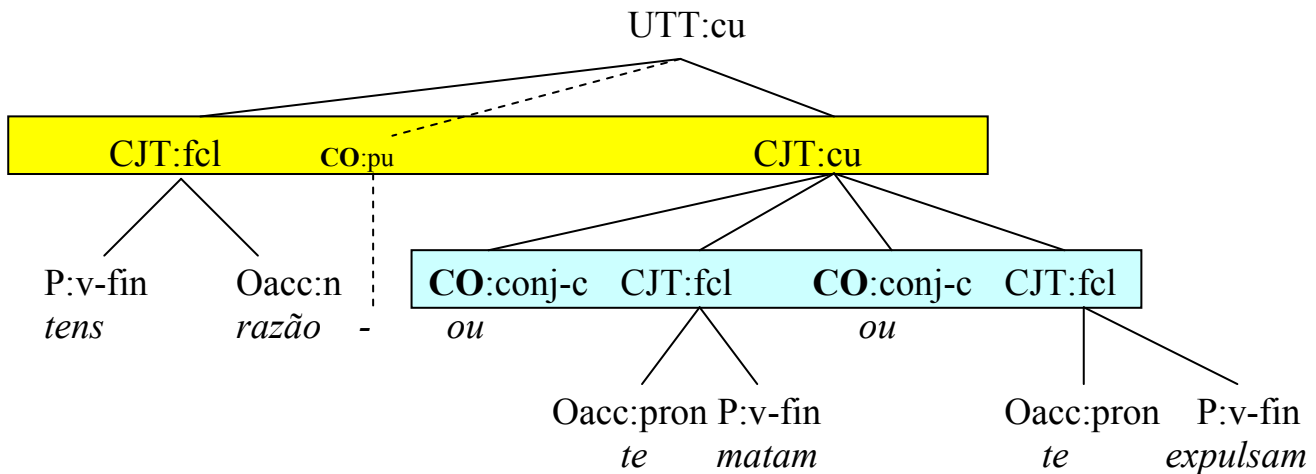
In (a), the nouns are co-ordinated first, and function as a complex head (**H:cu**) for the adjective postmodifier (**DN:adj**). In (b), the first noun is co-ordinated with an np that has already integrated the adjective postmodifier.

In a flat CG dependency notation (c), this ambiguity can be underspecified and expressed in *one* analysis:



Here, the postnominal tag (N<) points left to a nominal head, but underspecifies whether this head is a single noun ('guerras'), or 2 co-ordinated nouns ('secas e guerras').

Semantically, co-ordinations come as con-junctions ('e', 'nem'), dis-junctions ('ou ... ou', 'quer ... quer', 'ora ... ora') and contra-junctions²⁵ ('mas'). In the case of dis-juncting (blue), there is *one additional* coordinator, as a kind of "left bracket" for the cu, while con-juncting (yellow) may work even *without* a lexical coordinator:



Sometimes, co-ordinating conjunctions introduce a main clause:

a: *E leva teu irmão!*

Rather than operating with "defect" co-ordinated units, with only *one* conjunct, one might choose to regard 'e' in this sentence as a clause level constituent, either as CO (coordinator) or - if we want to avoid the CO function outside cu's - as fA (adverbial):

<i>E</i>	<i>leva</i>	<i>teu</i>	<i>irmão!</i>
		<u>DN:pron</u>	<u>H:n</u>
<u>CO/fA:conj-c</u>	<u>P:v-fin</u>	<u>Oacc</u>	
	EXC:fcl		

Consider also:

b: *Chovia muito, e não queríamos sair.*

As a matter of fact, the function of the co-ordinating conjunctions in (a,b) closely resembles that of "conjunctive adverbs" or "conjunctive adverbial expressions" that *sequentially* link statements in a kind of co-ordinated nexus of continuation (*apesar disso*), consequence (*pois, por isso, eis porque, conseqüentemente*),

²⁵ also called adversatives

concession (*ainda assim, ainda mesmo, apesar disso, nada obstante, no entanto*) or contrast (*porém, todavia*).

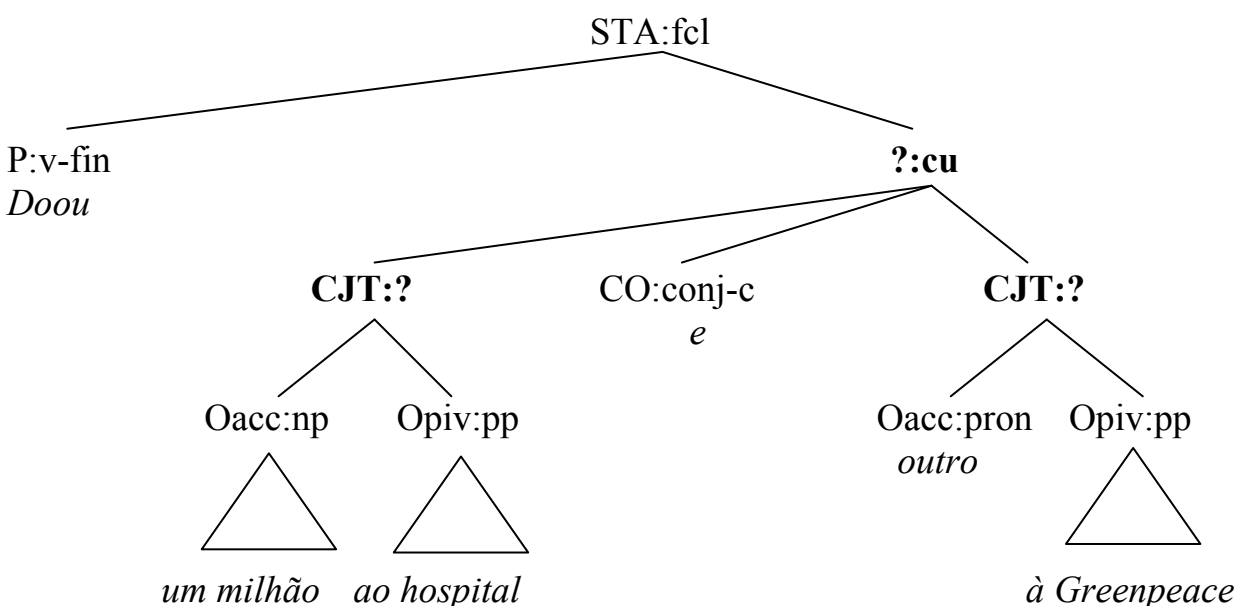
Thus, 'e' in (a) can be substituted by 'apesar disso', while 'e' in (b) expresses consequence and could be replaced by 'por isso' or 'consequentemente'. Likewise, sentence-initial 'mas' is an analogue of the adverbial expression 'apesar disso'.

This functional and semantic resemblance between certain conjunctions and adverbs supports a clause-level analysis of 'e' in the above cases, as for the corresponding adverbs. Next, we must choose a function tag, CO (the natural for conjunctions) or fA (the natural for adverbs). On the one hand, using CO:adv for "conjunctive adverbs" has the advantage of preserving both "conjunctivity" (as function) and "adverbiality" (as form). On the other hand, using fA:conj-c for a clause level 'e' that has no conjuncts to conjunct, seems useful, too – and we avoid using a paratagma level function on clause level.

Co-ordination is a way of streamlining the syntax of an utterance, since (co-ordinated) groups of constituents share their functional relation to other constituents, which therefore need not appear twice in the clause:

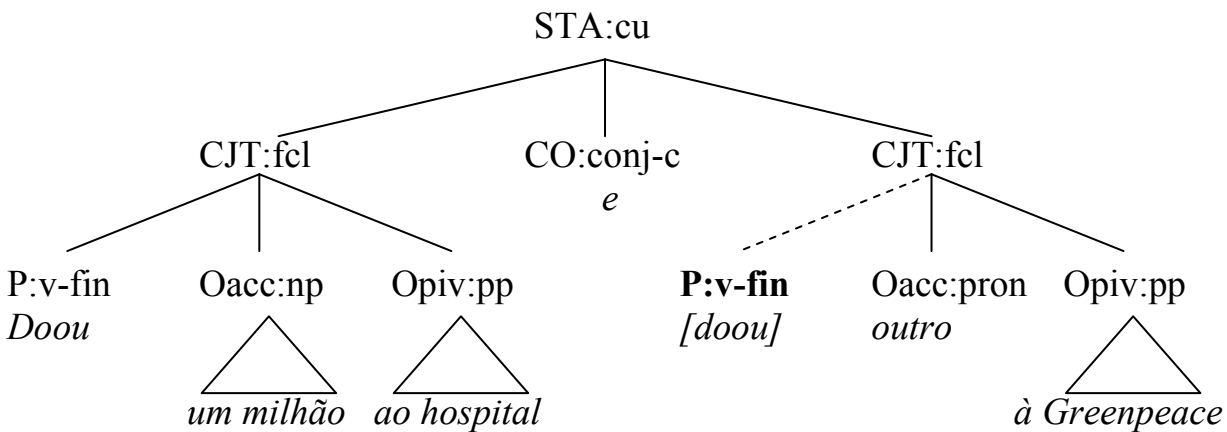
Doou um milhão ao hospital e outro ao Greenpeace.
 MV <ACC <PIV CO <ACC <PIV

In the CG-notation, there are 2 direct objects (ACC) and 2 prepositional objects (PIV) attaching left (<) to 1 main verb (MV), and since the syntactic notation is "flat", the lone co-ordinator (CO) can elegantly serve all 4 objects without specifying constituent boundaries. Constituent boundaries are, however, necessary in a syntactic tree for the same sentence, creating problems as to which function to assign to the resulting co-ordinating unit (? :cu), and what form to the conjuncts (CJT:?), since we do not have a function term for a nexus between direct and prepositional object, nor a form category for unco-ordinated juxtaposed np's and pp's, or, for that matter, pronouns and pp's:



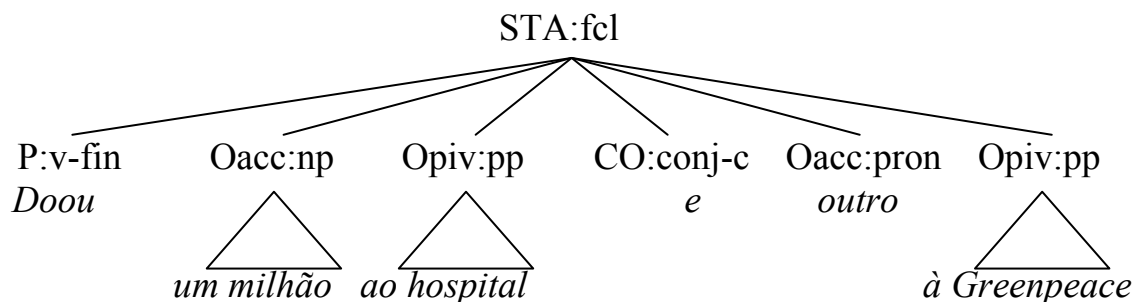
One possibility is to let the analysis stand as it is – with question marks. This is the solution adopted in Carl Bache’s *stacking approach* in "Presentation of a pedagogical sentence analysis system" (in *Hermes, Journal of Linguistics*, 17, 1996), where X is used as a function stack, and x as a form stack, each *stack* postponing “real” analysis to a lower – more analytic - level in the tree.

Another solution is to “clone” that or those constituents (in the shape of zero-constituents), that have been economized by the co-ordination in the first place. In this case, that would mean adding a zero-constituent predicator (‘doou’) after the co-ordinator (‘e’):



This way, only “established” forms (here, fcl’s) are co-ordinated, and the cu itself has a “real” function, that of statement (STA).

A third solution would be to abolish the category of co-ordinated units altogether, define co-ordinators as clause- or group-level constituents, and – in the given sentence – opt for a CG-like, flat analysis on the clause level:



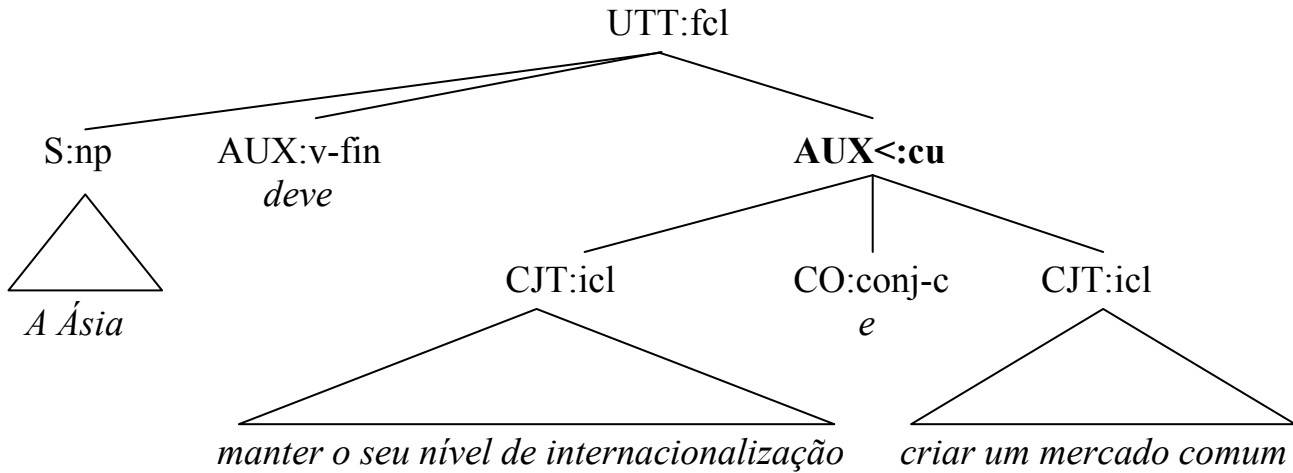
In the Portuguese VISL system, zero constituents are avoided, both for pedagogical reasons (i many cases it isn’t even obvious where to add a zero constituent nor what the concerning “invisible” word should be), and because Constraint Grammar based systems of automatic analysis need “real” words for their form and function tags.

In the analysis of compound units we will therefore create conjuncts as they appear at the syntactic *surface* – even where this method results in undefined conjunct forms or compound unit functions (as shown in the first analysis).

In practice, question mark tags (or *stacks*) are rarely needed. Rather, some pre-existing category will offer itself for deeper insight. Take, for example, co-ordination

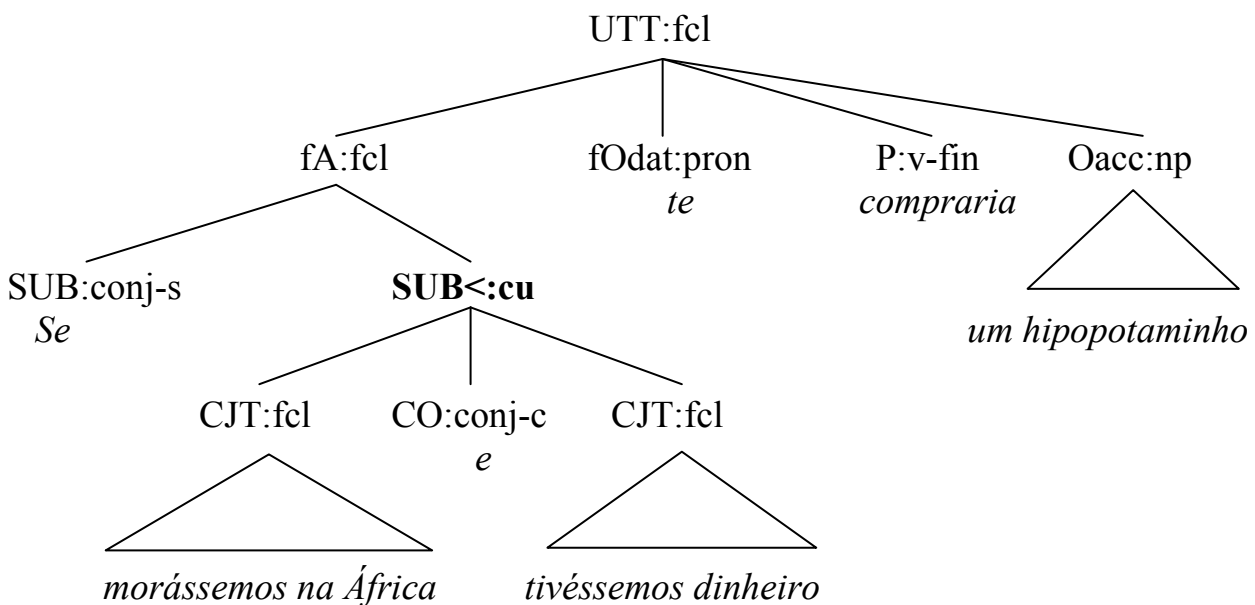
after auxiliaries, providing evidence for the independent existence of the category AUX< (auxiliary complement), as used in the Portuguese and English VISL CG:

A Ásia deve manter o seu nível de internacionalização e criar um mercado comum.



Another example is the SUB< constituent (clause body), which was introduced in the CG analysis for the analysis of averbal sentences, but comes handy in co-ordination, too:

Se morássemos na África e tivéssemos dinheiro, te compraria um hipopotamozinho.



symbol	category	examples
CO	coordinator coordenador koordinator	Fugiram do zôo um hipopótamo e um crocodilo.
CJT	conjunct (elemento) conjunto konjunkt	Fugiram do zôo um hipopótamo e um crocodilo.
cu	compound unit paratagma paratagme	ver Roma e viver a história era o seu sonho.

9. Comparatives

Portuguese comparative structures are traditionally divided into three types of comparatives and two types of relative superlative:

- (6) comparative of equality (*tão ... como*),
- (7) comparative of superiority (*mais ... que*)
- (8) comparative of inferiority (*menos ... que*)
- (9) superlative of superiority (*o mais ... de*)
- (10) superlative of inferiority (*o menos ... de*).

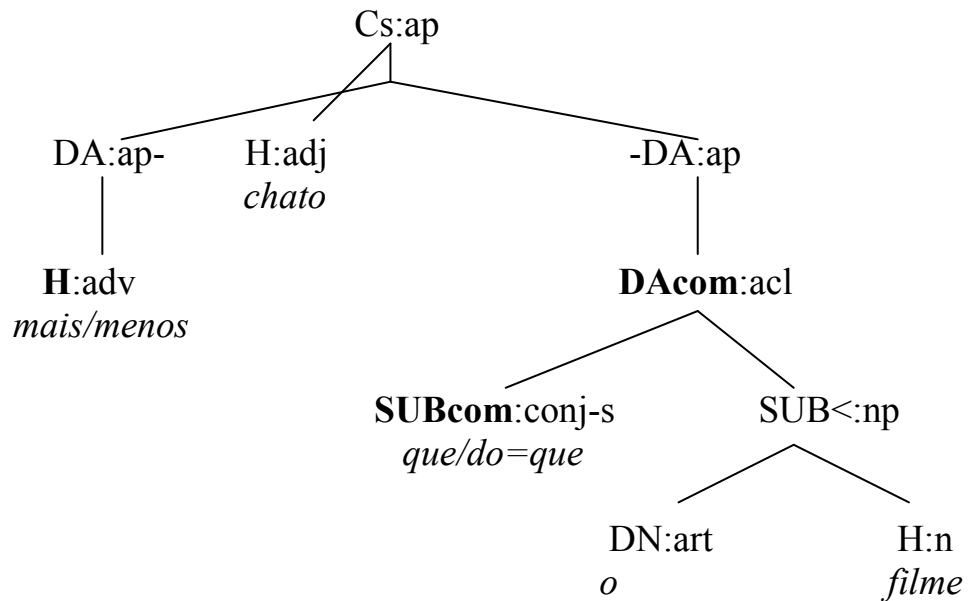
Syntactically, the connection between *the comparative kernel* and the *comparandum* is established by means of relational particles: - relative adverbs (*como, segundo, conforme, quanto, quão*) or relative determiners (*quanto, qual*), the subordinating conjunctions *que* and *do_que*, and the preposition *de*. The relative particles are used for *equalitative* comparisons, while *que, do_que* and *de* cover both superiority- and inferiority-comparisons, which we will here lump together under the term *correlative* comparisons.

COMPARATIVE KERNEL		COMPARANDUM			
HOOK	BASE	HEADER	BODY		
O livro é mais/menos	chato	que	o filme.		<i>correlative acl</i>
		do=que	dizem.		<i>correlative fcl</i>
... o mais/menos	chato	de	todos.		<i>correlative superlative pp</i>
... tão	chato	como	o autor (disse)		<i>equalitative acl (fcl)</i>
... -	chato	como	um filme velho		<i>direct comparison acl</i>
... -	chato	que	nem um domingo de chuva		

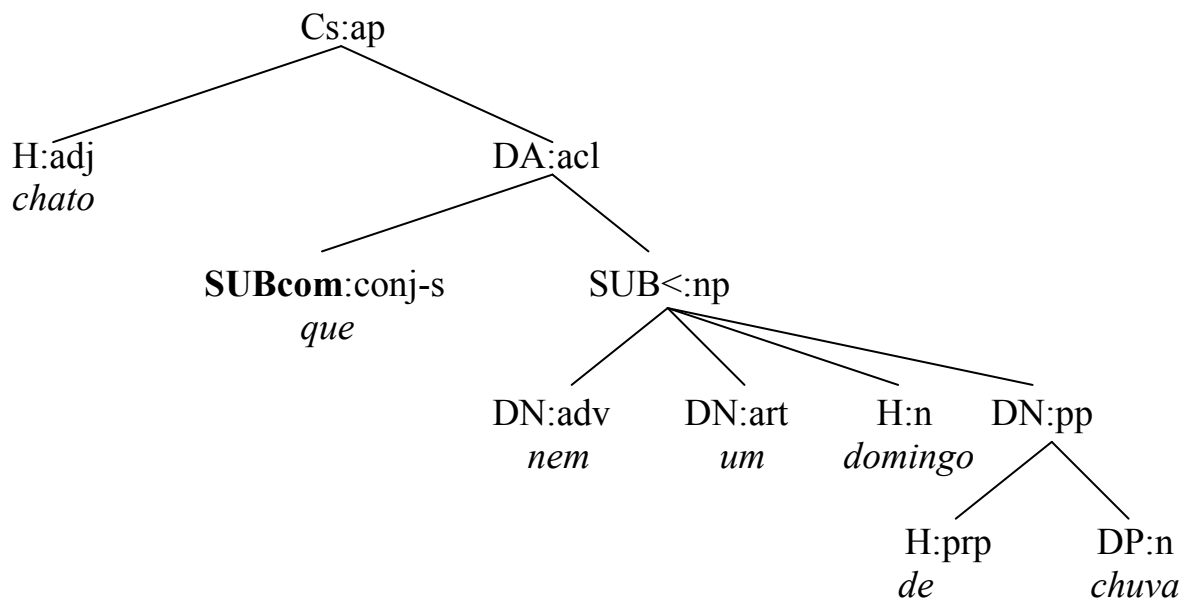
In most cases these comparandum header particles need a premodifying "hook" at the comparative kernel (head [H] of the *adject-ap* [DA:ap] in (a)), to which they are dependency-linked. But in a few constructions direct comparisons (shaded) do occur (b). In type (a) constructions the comparandum clause (DAcom:cl) is an **argument** of the comparison-hook (*mais/menos*), in type (b) constructions it functions as a **post-modifier**.

As correlative hooks function the quantifying adverbs *mais* and *menos* which denote the comparative degree of Portuguese adjectives and adverbs, and as equalitative hooks the adverbs *tão, tanto* and the determiners *tanto, tal*. There are restrictions as to which hook can be combined with which relational particle, for instance *mais/menos - que/do_que, tal - qual, tanto - quanto, tão - como*.

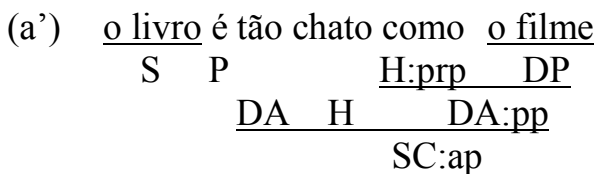
(a)



(b)



Some grammarians would choose to describe what we call comparandum header, as a preposition (a') heading a pp (without a verb). Also, the comparandum might be considered a dependent not of the premodifying comparative hook, but of the comparative base, yielding a flatter constituent analysis of the adjective group in question, free of disjunct constituents:



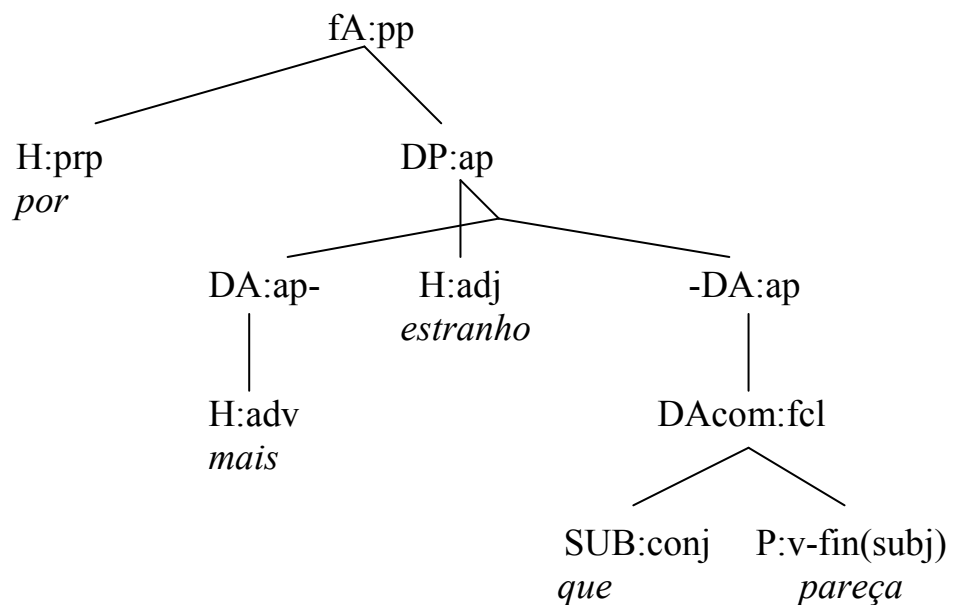
In (i), if assigned function, the comparandum body is not a clause level, but a group level constituent (DN), demonstrating clearly the limits of forced fcl-analyses and zero-constituents – it doesn't make sense to add [são] to form 'do que [são] bem-definidos', since 'eruditos' itself is *not* a Cs, but a DN.

In some cases, function tags for the comparandum body can help express ambiguity, as in (j) where one doesn't know whether the poor turkey is having lunch or being had for lunch:

(j) Come mais milho do que **peru**. (Oacc vs. S)

A special form of (correlative) comparative construction occurs in the fixed expression 'por mais [adj] que [v-fin(subj)]', where an adjective functions as argument of the preposition 'por' and is modified by a comparative hook ('mais') which governs a subjunctive (!) comparandum fcl:

por mais estranho que pareça, ...



Another – more general – case, where the comparandum fcl is in the subjunctive, are relative fcl's after superlatives: "o melhor que conheça", and there are also examples of direct comparisons, without a hook, where the comparandum fcl has to be in the subjunctive:

Bom	que	seja,	<u>o rapaz</u>	é	<u>nenhum santo.</u>
	<u>SUBcom:conj</u>	<u>P:v-fin(subj)</u>			
<u>H:adj</u>		<u>DAcom:fcl</u>			
	fC:ap		S:np	P:v-fin	Cs:np

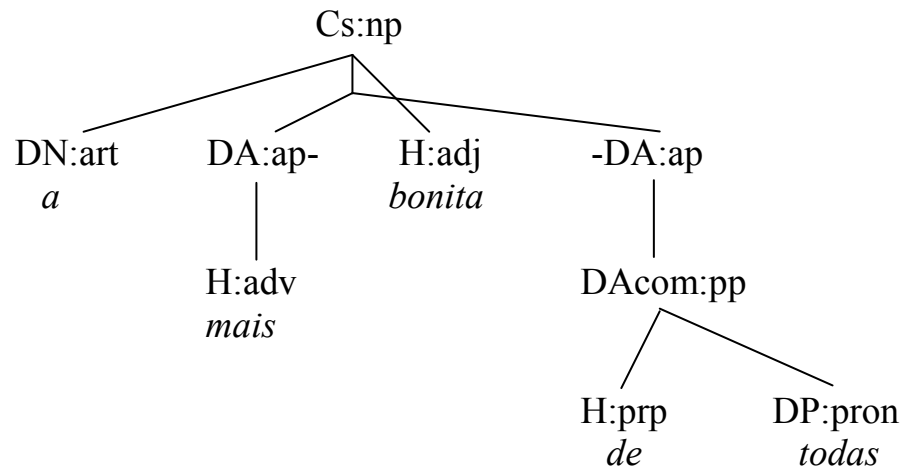
In analytic superlative constructions, the preposition 'de' is used as comparandum header, and the comparandum body has to be a (collective) nominal. Also, the whole

comparison construction (unless functioning as postnominal to a definite noun), is preceded by a definite article.

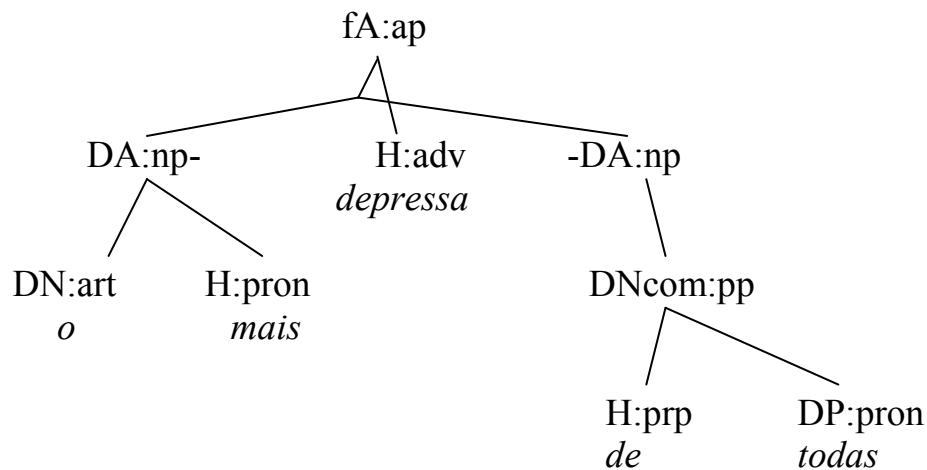
In the case of an adjective base (a), the article must - since it is inflecting - be considered as prenominal dependent of the adjective²⁷, creating an np in the process ('ela é a mais bonita de todas'), rather than an adjp.

In the case of an adverb base ((b): 'ela trabalha o mais depressa de todas'), the article doesn't inflect and could be regarded as adnominal dependent of a pronominal 'mais', yielding a nominal intensifier ('o mais de todas'):

(a)



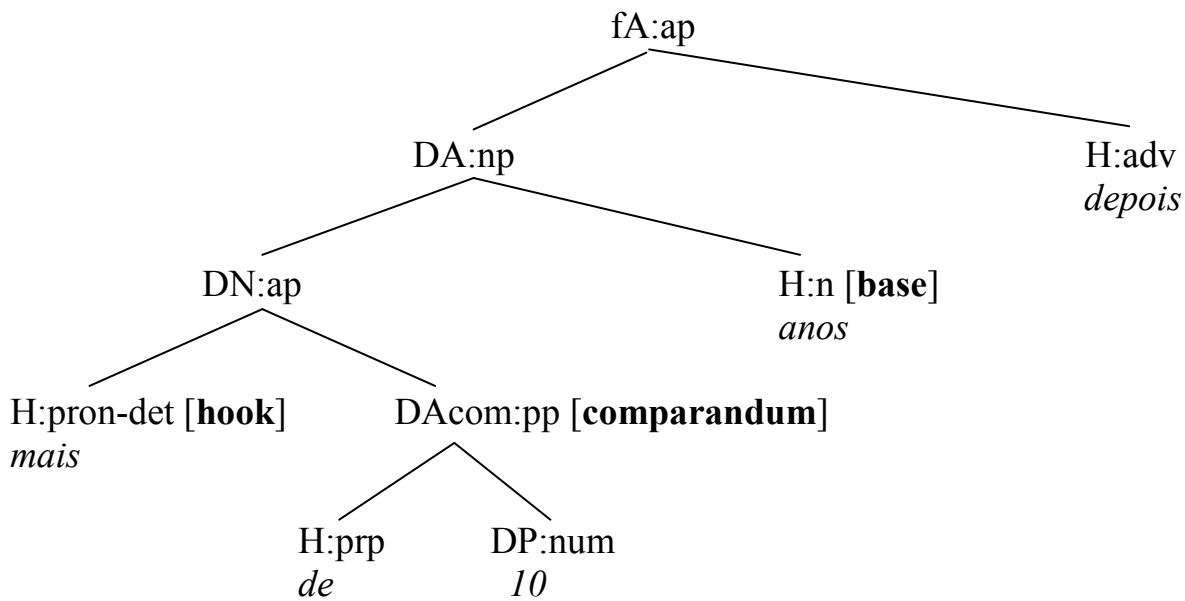
(b)



Only rarely, in the case of comparatives with a numeral as comparandum body and a noun as comparative base, do we find both hook and comparandum to the left of the base: 'mais de 10 anos depois'.

²⁷ In the example the adjective is premodified by an intensifier DA. In order to do the resulting ap ('mais bonita de todas') justice, one might consider to regard the whole ap as a complex head in the np "created" by adding the DN:art premodifier 'o':

O	mais	bonita	<u>de</u>	<u>todas</u>
	<u>H:adv</u>	-----		<u>DAcom:pp</u>
	<u>DA:ap-</u>	H:adj	<u>-DA:ap</u>	
<u>DN:art</u>	<u>H:ap</u>			
	?:np			



On clause level, ordinary direct comparisons (a) function as adverbials in much the same way as a certain type of "commenting comparison" (b):

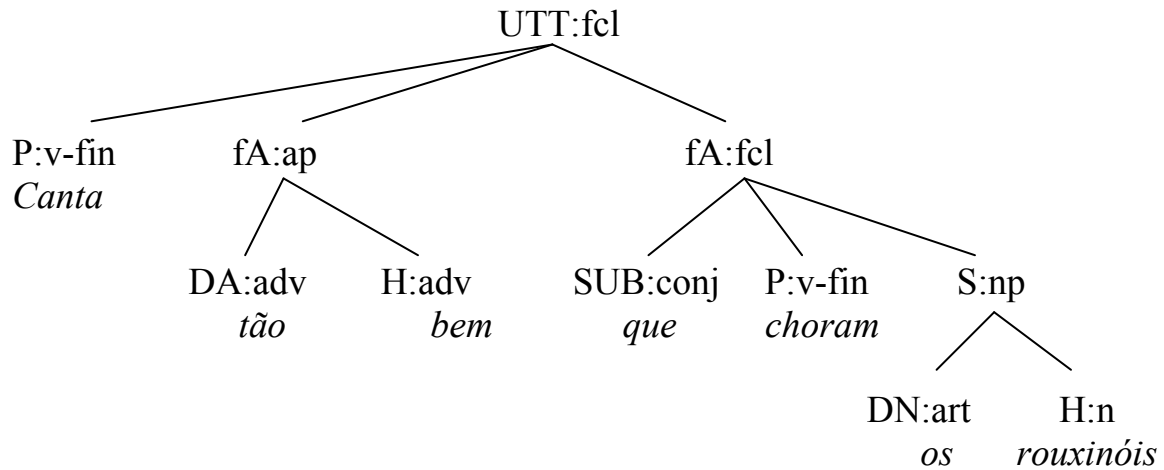
- (a) Vivem como os antigos romanos [viviam].
 (b) Segundo/conforme eles [dizem], pode viajar amanhã mesmo.

In both cases, the concerning adverbial (underlined) is headed by a word of dubious word class (in bold face), which for functional reasons could be tagged as both a preposition or a conjunction, depending on the absence or presence of a verb within the adverbial constituent. Accordingly, the form category of the adverbial would change from group (pp) to clause (fcl). In order to achieve a more homogeneous description, we will choose a third path and use one (clausal) analysis for all readings of both (a) and (b), calling both 'como' and 'segundo/conforme' for comparative adverbs, functioning as clause subordinators (for an acl or fcl, respectively).

Last, there is some resemblance between hooked comparisons and hooked consecutive constructions:

- (a) Canta **tão** bem como um rouxinol [canta].
 (b) Canta **tão** bem que choram os rouxinóis.

In one analysis, the difference between the two cases is both structural and functional. The comparandum in (a) is (argument) part of a disjunct DA constituent, while the "consecutivum" (underlined) in (b) is a clause level adverbial adjunct (fA).



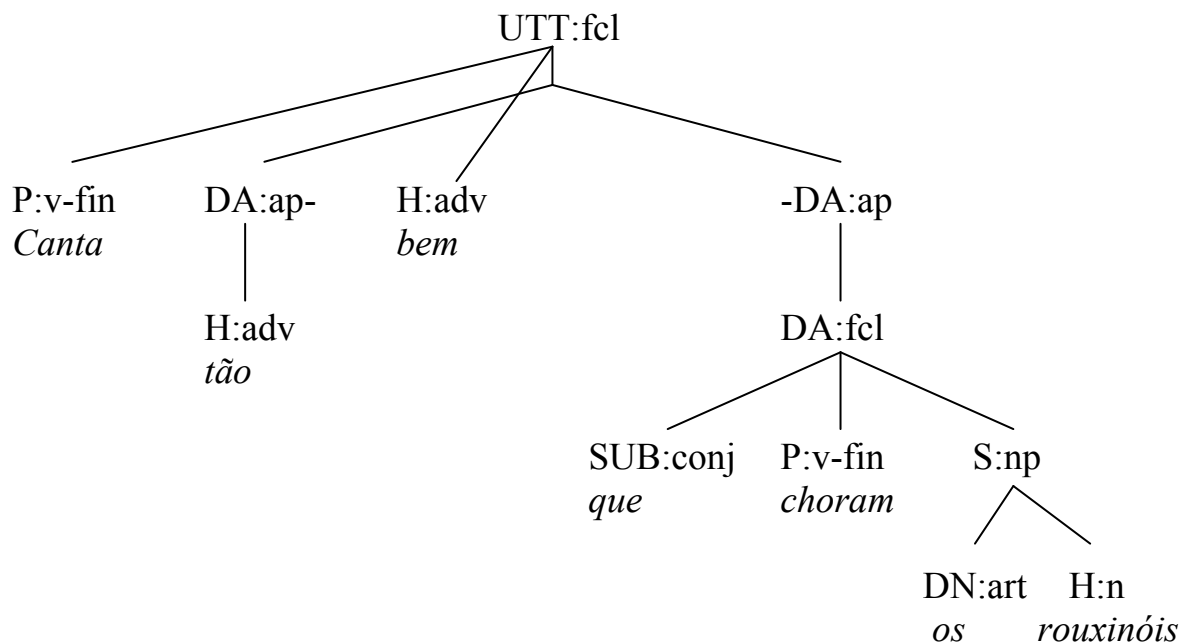
However, like in (a), there is still some syntactic link between 'tão' and the subordinated clause in (b), since 'tão' cannot be omitted:

*canta bem que choram os rouxinóis.

Also, 'tão bem que' can be replaced by 'de maneira que' or 'de modo que' or 'tanto que', making the presumed adjunct adverbial unisolatable (from the que-clause), suggesting in stead an analysis where 'que choram ...' is dependent part (DA/DN) of a larger group constituent (DA:ap ['tão/tanto que'] or DP:np ['maneira/modo que'])²⁸:

O que acontece que choram os rouxinóis?

- Canta tão bem. (fA)
- *Canta de modo/maneira. (?)



²⁸ The DN-case, where the subordinated clause functions as postnominal is often resolved by regarding 'de modo que' and 'de maneira que' as lexical units without syntactic structure, to be tagged as complex conjunctions. This way, the subclause *does* function as adverbial adjunct (fA:fcl).

Exercises:

- 9-1. O filho é mais alto que o pai.
- 9-2. O filho é tão alto como o pai.
- 9-3. Não sou uma mulher como as que existem na terra.
- 9-4. Ele fala como ele pensa.
- 9-5. É tão avaro como rico.
- 9-6. Tinha menos dinheiro para gastar do que o seu irmão.
- 9-7. Bom que seja o rapaz não é nenhum santo.
- 9-8. Comeu tanta comida que nada sobrou para a irmã.
- 9-9. Ficou tal qual era antes.
- 9-10. Estamos nos tornando o mais pobre dos países urbanos industriais.
- 9-11. Por mais contraditório que pareça, o velho funcionário da VARIG não quis viajar de avião.
- 9-12. Na época, Londres já era uma cidade de não mais de 100.000 habitantes.
- 9-13. Trouxeram cerca de 10 bilhões de dólares, conforme se estima.
- 9-14. Foi descongelado como herói do empresariado.

10. Utterance function

So far, we have defined function relative to a constituent's head, with clause level constituents "functionalized" by the clause's main verb. Subclauses are themselves constituents and can be assigned a function tag by the same principles. But what about clauses, groups or words that are *not* constituents, because they themselves constitute the highest level of analysis?

The top node in a syntactic tree, the sentence, derives its function from context and human interpretation, i.e. from *outside* the realm of syntax proper. The string of words making up the sentence becomes an *utterance* (UTT), which will be our dummy *function* tag for the syntactic top node.

To a certain degree, key words (interrogatives), mode (subjunctive, imperative) and punctuation (., ? or !) can give a more specific indication of top level function. Thus, with regard to the 4 functions to be distinguished here, full stops indicate statements (STA), question marks indicate questions (QUE), and exclamation marks indicate exclamations (EXC) or commands (COM):

- (a) Não ajuda. - (STA:fcl)
- (b) **Quem** te ajudou? - (QUE:fcl)
- (c) Puxa! - (EXC:v-fin)
- (d) Cala a boca! - (COM:fcl)

However, this is not a safe rule. Consider:

- (a) Ela é a maior fofoqueira da cidade, **sabe?** – STA (QUE?)
- (b) Pode entrar. – COM (STA?)
- (c) Pensei, se não **fosse** inoportuno, em você me acompanhar ... – QUE (STA?)
- (d) Ah, mas **que** coisa linda, **quem** imaginava! – EXC (QUE?)

In (a), a statement and a "tag"-question have been fused, with the tag - 'sabe?' – taking over in terms of punctuation, in spite of the over-all statement function. In (b), a command is camouflaged – for reasons of politeness – as a statement. In (c), the question content of the utterance is only implied – again for pragmatic reasons (politeness) -, by the subjunctive conditional subclause, and therefore, the surface mark of question punctuation is missing. In (d), though supported by an exclamation mark, the exclamation reading is not global, since two interrogatives ('que' and 'quem' are present, one of them subject of the utterance's only predicator.

In short, assigning utterance function is possible only from a global, contextualized, semantic-pragmatic perspective, not syntactically from *within* the sentence window.

symbol		category	examples
UTT	STA QUE COM EXC	utterance enunciado ytring	Não faz nada. [statement] Já vais embora? [question] Espera! [command] Pobre de mim! [exclamation]
STA		statement enunciado declarativo udsagn	A terra é redonda. Gosta muito de elefantes. Sua vez. Às sete. Obrigado.
QUE		question enunciado interrogativo spørgsmål	Quem quer uma cerveja? Já ligou para o ministério? Quando?
COM		command enunciado imperativo ordre	Pára com isso! Venha pra cá! Fora!
EXC		exclamation enunciado exclamativo udråb	Deus! Que beleza! Quanta gente!

11. Topic and focus constructions

Running text can be viewed as sentences linked by *topic-focus* (or *thema-rhema*) relations. Pragmatically, *topic* constituents tell us what a statement is about, *focus* constituents introduce new information, often *about* the topic. In the examples, topics are underlined, focus constituents are in bold face.

- (a) Na beira do rio, dormia **um hipopótamo** (S).
- (b) O hipopótamo estava **contente** (Cs) e sonhava com **uma bela hipopótama**.
- (c) Hipopótamas eram **raras** (Cs) na região, mas finalmente **tinha encontrado** uma.
- (d) Era **muito bom** (Cs) isso.
- (e) Ela iria amansar a sua vida e lhe dar **filhos fortes** (Oacc).

According to Togeby (1993, “Praxt”), focus is the *last sentence constituent, that is not definite*. Topic material, by contrast, is normally known in advance (from the last sentence, or from extra-lingual context), and will therefore appear in definite form, as names, pronouns or generic terms.

Given the linear nature of language flow, topic constituents are likely to appear left, focus constituents right, as is the case in all examples but (d). In (d), the focus is a subject complement (Cs), as in (b) and (c), and it *is* located in the usual Cs-position, immediately to the right of the predicator, - so one could say that it’s the subject (isso), that is placed in a special way (as opposed to ‘isso era **muito bom**’).

In copula-constructions, subjects are usually definite and topicalized, while the subject complement is indefinite and focused. However, there is no general link between subject and topic, neither for intransitive verbs (a) nor for transitive verbs (f):

- (f) A pequena Maria passeava na mata. De repente, **um lobo** comeu a menina.

Intransitive verbs with agent subjects like ‘dormir’ or ‘trabalhar’, usually place topic subjects to the left (‘o hipopótamo **dormia**’, 1) and focus subjects to the right (a). Note that the topic subject works fine with only a verb for focus, while the focus subject is not content with a verb as “topic” (2a, 4a-b).

Ergative verbs with patient subjects, like ‘cair’ or ‘morrer’, allow both topic-less focus constituents (2b) and topic subjects (2c) to the right, i.e. *after* the verb. Focus constituents left of the verb (4), however, without a syntactic topic, sound awkward (though not outright ungrammatical) in all cases:

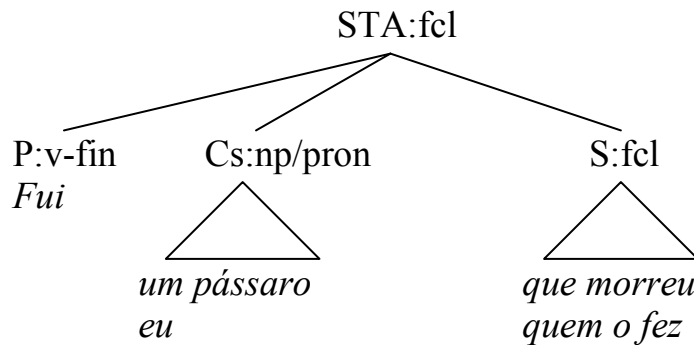
- | | |
|----------------------------------|----------------------------------|
| (1a) <u>O pássaro</u> dormia. | (1b) <u>O pássaro</u> morreu. |
| (2a) ?Dormia um pássaro . | (2b) Morreu um pássaro . |
| (3a) ?Dormia <u>o pássaro</u> . | (3b) Morreu <u>o pássaro</u> . |
| (4a) ? Um pássaro dormia. | (4b) ? Um pássaro morreu. |

In order to make possible focus fronting, Portuguese as well as English and Danish uses cleft sentences rather than type (4) sentences:

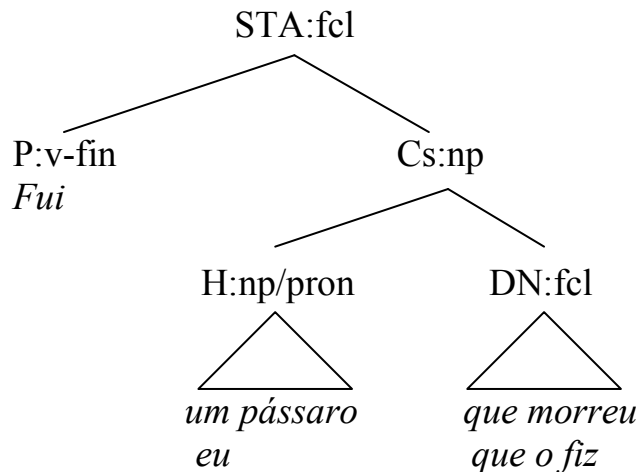
(4') Era um pássaro que dormia. Foi um pássaro que morreu.

In these constructions the focus constituent is moved out of the original clause as a subject complement of a copula verbs (mostly 'ser'), while the original clause seems to become a subordinated subclause, with a relative pronoun as "dummy" for the removed constituent. Syntactically, the finite subclause could either be analysed as an "absolute relative" (a), or as a postnominal adjunct (DN:fcl) of 'pássaro' (b). The ambiguity seems to enjoy morphological support, since there is a difference in verbal inflection between (a) 'Fui eu quem o fez' and (b) 'Fui eu que o fiz'. In (a), *quem* governs 3.person singular (*fez*), suggesting an independent fcl constituent (S:fcl). In (b), *que* governs 1.person singular (*fiz*), suggesting closer ties with *eu* (DN:fcl):

(a)



(b)

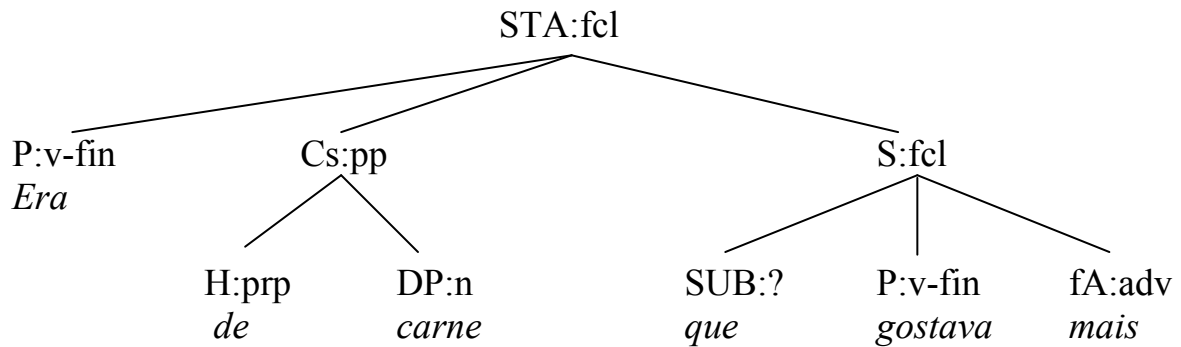


However, neither (a) nor (b) is fully satisfying from a *semantic* point of view. While the intended meaning is *it was a bird that died*, analysis (a) literally means something like *what died was a bird*, while analysis (b) translates as *it was a bird which died (rather than another kind of bird)*. (a) is obviously closer to the intended meaning than (b), but the supposed S:fcl fails the 'o que/quem'-substitution test for "true" absolute relatives:

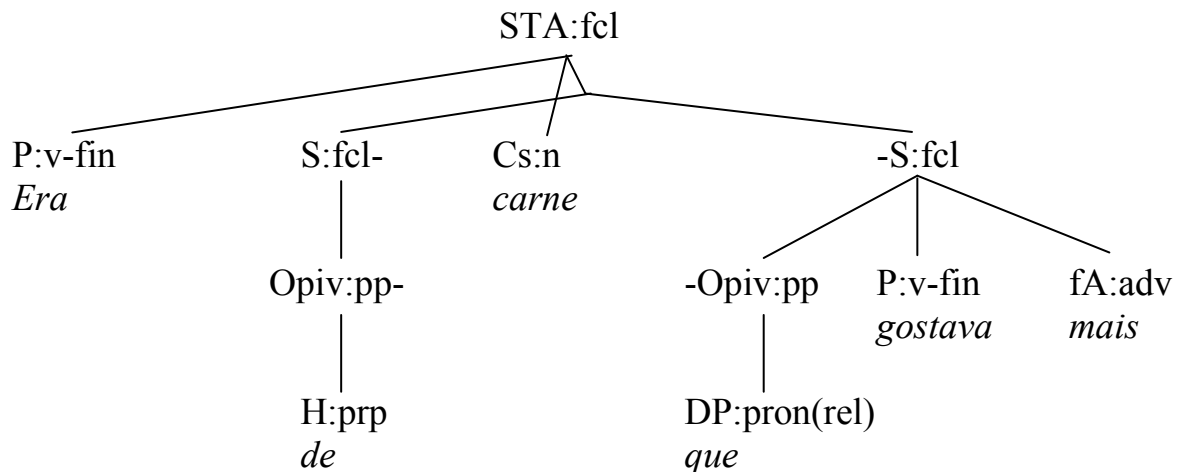
(O) que morreu foi um pássaro (true absolute relative in S:fcl)
 Foi um pássaro **(?o) que** morreu (different meanings)
 Somos nós que/*quem o queremos (agrammatical with *quem*)

Thus, *que* in our sentence cannot be replaced by *o que* like in ordinary subject clauses.

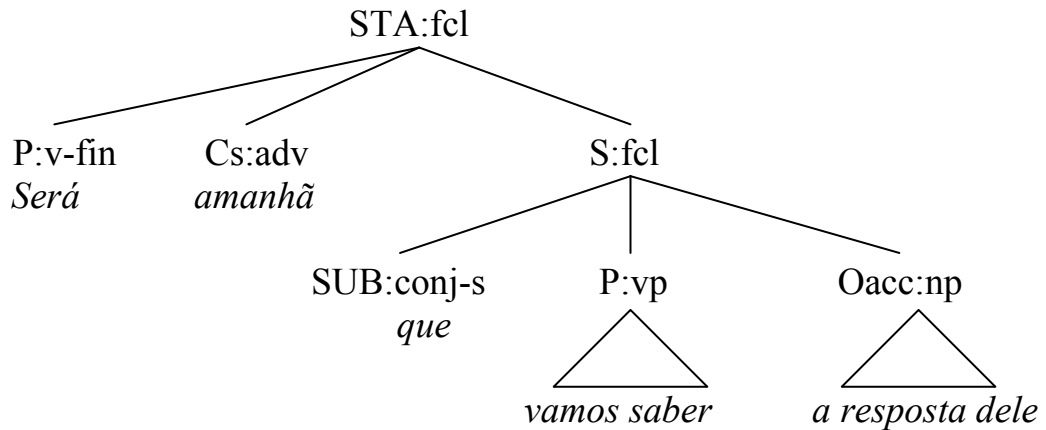
Also, while the relative pronoun analysis works more or less for the focusing of nominal constituents, it seems unsatisfying for pp- or adverbial constituents:



In this example, it is an Opiv constituent that has been focused, stranding 'gostava' without a prepositional filler for its valency slot inside the subclause. Even if we accept 'que' as a complement of 'gostava', it is hard to see how a nominal pronoun can be placeholder for a pp. And semantically, it doesn't make sense that *what he liked most* "consists of meat" – which is the literal translation that matches the syntactic analysis given. To even get a semantically viable type (a) analysis, we have to introduce crossing branches or discontinuous constituents into the tree:



With an adverb in focus it becomes even more difficult to treat *que* as a relative pronoun - we would need to add *que* to the short and otherwise closed list of adverbial relative pronouns. More natural seems an analysis of *que* as subordinating conjunction (conj-s):



Still, like in the other focus sentences we have analysed, syntax does not match semantics – ‘that we will get to know his answer’ is not ‘today’ in the same way it could be ‘certain’ or ‘dubious’. Also, the supposed Cs ‘hoje’ is syntactically bound to the focus position *left* of the supposed subject fcl, while a Cs ‘certo’ *could* be moved into the normal Cs position right of the subject:

Que vamos saber a resposta dele é certo.
 *Que vamos saber a resposta dele é hoje.

A completely different approach to such cleft sentences is a flat analysis where the original constituent functions (from the non-cleft sentence) are maintained, and one regards *e/era/foi/será* and *que* as two parts of a syntactic “focus marker bracket”. In Constraint Grammar, this solution is straight forward:

Era	de	carne	que	gostava	mais		
@FOC>	@PIV>	@P<	@FOC<	@FMV	@ADVL		
Será	amanhã	que	vamos	saber	a	resposta	
@FOC>	@ADVL	@FOC<	@FAUX	@MV	@>N	@<ACC	

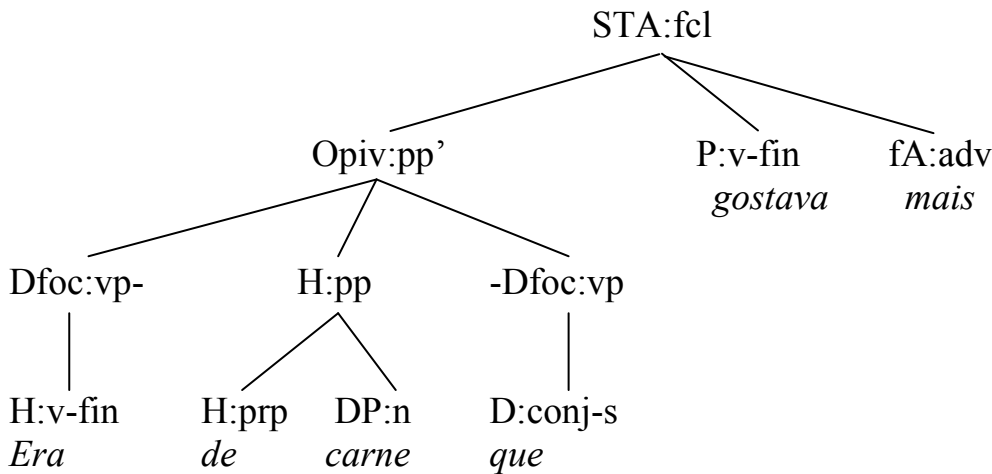
In this notation, we have a focus marker head (@FOC>), with its arrow pointing towards the focused constituent (‘de carne’, ‘hoje’), and a focus marker dependent (@FOC<), with its arrow pointing back at the focus marker head.

In a syntactic tree, this would translate into a disjunct focus marker constituent, which could be attached as dependents to the focused constituent as a whole, in the same way in which we have treated “operator adverbs” (‘não’, ‘ainda’, ‘até’ – cp chapter 6)²⁹:

Gostava não de carne, mas de peixe. Come até rã.
 Ainda hoje vamos saber a resposta. Hoje mesmo acabará.

²⁹ In fact, some grammarians would argue that it is one of the functions of such adverbs to create focus constructions, i.e. that they are focus markers in their own right.

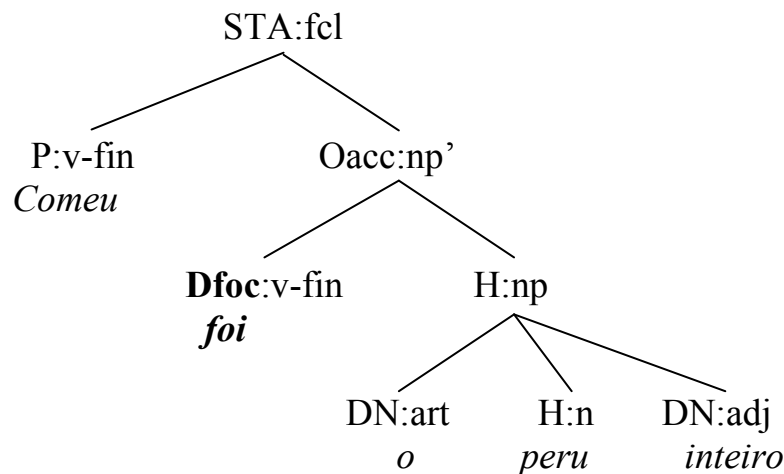
Since the head of the focus marker constituent is a verb, we might regard its form - tentatively - as vp (verb group). Thus, we get:



That the focus marker in such sentences is, in fact, a hypotactic group with the 3. person form of *ser* as its head, is made plausible by the fact that the focus marker head verb can be used on its own, too (without *que*), especially in colloquial language:

Comeu **foi** o peru inteiro.
Gosta é de briga.

By attaching the focus marker as a dependent to the focused constituent, we get:



Interestingly, *que* seems to be necessary for closing the focus bracket only if the focused constituent is fronted (a). And *que* cannot be used *without* fronting (b,c), - unless the focused material is an np, allowing substitution with *o que/quem* and S:fcl analyses (a').

- (a) **Foi** o peru inteiro **que** comeu.
- (a') (O que) comeu foi o peru inteiro.
- (b) *Que gostava mais, era de carne.

- (c) *Que vamos saber a resposta, é hoje.

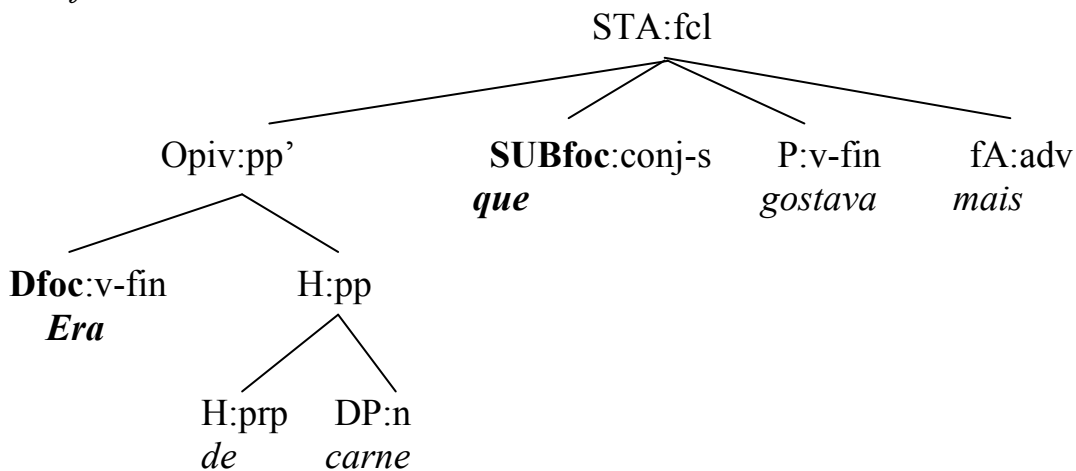
One could say that *que* in (a) functions as a syntactic cleft marker, separating the two finite verbs (*foi* and *comeu*), somewhat like a comma would, - which is not necessary in (a'), since *foi* in focus-fronted constructions has a position in the sentence that allows it to function as both focus marker and cleft marker.

In a way, *que* in cleft sentences is a subordinator that does not head a subclause, but merely chains two parts of the same (cleft) main clause. When introducing predicator vp's, we have assigned a similar "chaining function" (SUBaux) to the auxiliary particle *que* in verb chains after *ter* :

Não	tem	que	comer	carne.
	<u>AUX</u>	<u>SUBaux</u>	<u>MV</u>	
fA:adv		P:vp		Oacc:n

Here, too, we had the choice of syntactically *showing* the subordination – and creating a unique one-purpose constituent (auxiliary complement, AUX<, '*que comer carne*') in the process -, or else of placing the subordinator on *one* syntactic level with the two verbs chained by it, as in the analysis shown here.

Similarly, we could keep the cleft-sentence constituent *que* at main clause level as a *focus subordinator*, SUBfoc:



In this analysis, we avoid the awkward stranding of a conjunction as rightmost part of a disjunct dependent, while still marking both focus scope (the head of Dfoc *Era*) and cleft position (SUBfoc *que*).

We have seen that the "natural" order of topic and focus is left-to-right, and that a focus constituent can be marked by fronting and/or clefting. Subject topics are usually fronted and thus marked anyway, but non-subject topic constituents can be marked by fronting, too:

- (T1) O seu carro, vendeu para o vizinho.
Para o vizinho, vendeu o seu carro.
(T2) A princesa, sonhava com ela cada noite.

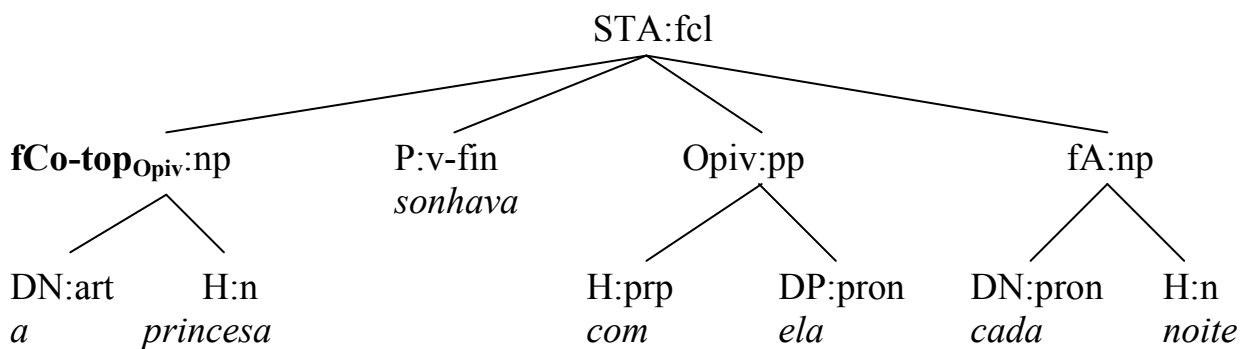
- *Com a princesa, sonhava com ela cada noite.
 (T3) À filha, prometeu-lhe um cavalo.
 *À filha, prometeu a ela um cavalo.
 Aos inimigos, matou-os todos.
 A dinheirama, ganhou-a no jogo do bicho.

(T1) is pure **topicalization**, the direct object *o seu carro* or the prepositional object *para o vizinho* being fronted into the topic-position to the left, otherwise occupied by topic *subjects*.

(T2) is quite different, since the topicalized constituent, *com a princesa*, still has a – pronominal – place-holder in its old position (*com ela*). Also, the topicalized constituent (unlike T1), is “normalized” to nominative case (*a princesa*, not *com a princesa*), i.e. normalized to *subject* case. Mateus et. al. (1989, “Gramática de Língua Portuguesa”) call this construction for **pending topic** (“Deslocação à Esquerda de Tópico Pendente”). Pending topics with other than “nominative” case (T3) are only grammatical with *enclitic* placeholders (*-lhe*, but not *a ela*, *-os* but not *os inimigos*).

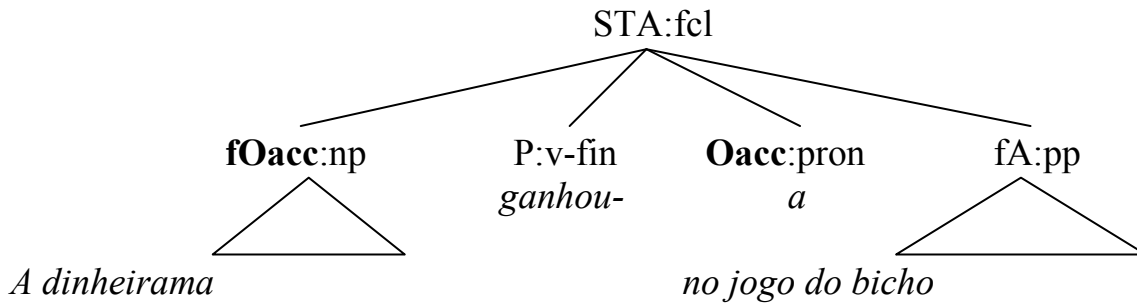
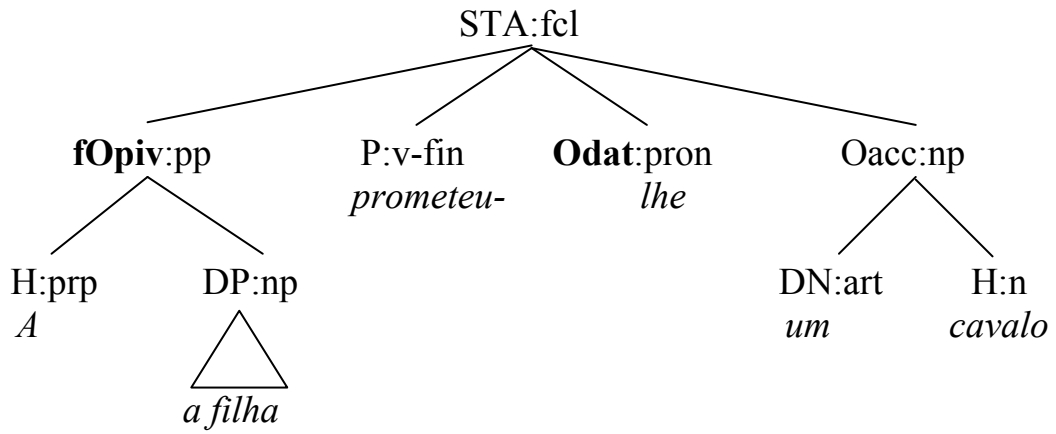
While (T1) allows a straightforward syntactic analysis - (Oacc P Opiv) or (Opiv P Oacc) -, pending topics do not. In (T2), there is in the topic constituent a clash between form and function (“nominative” np vs. Opiv), and (T3) looks like a violation of the uniqueness principle³⁰.

Since we don’t want 2 Opiv’s anyway, a solution for the “nominative” topic in (T2) could be to view it as a free topic predicative of the place-holder Opiv:



In (T3), the breach of the uniqueness principle can be cushioned somewhat by analysing pending topic objects as *free objects* (fO) , i.e. as not valency bound. Also, the *syntactic* distinction between enclitic **Odat** and non-pronominal **Opiv** helps defend the uniqueness principle in the dative case:

³⁰ Stating that without co-ordination, there must not be 2 or more arguments with the same function in a clause or group.



APPENDIX 1:

Word classes (morphological form)

When discussing syntax, one does not usually pay much attention to the smallest building blocks of syntactic form, words. Word boundaries are viewed as stable and self-evident, with blank spaces being all that's needed to determine what a word is. Consider:

- (1) galinha-d'angola
- (2) dá-me-lo
- (3) dar-me-iam
- (4) O Porto, Estados Unidos
- (5) do que ('than'), mesmo que ('though')
- (6) em vez de
- (7) de maneira que
- (8) fato de banho

From a "blank space perspective", 1-3 would be words, while 4-8 would not. However, semantically (1) and (8) both denote objects that cannot be dissembled. A 'fato de macaco' is not a suit for apes! Also names (4) could be regarded as morphological words, as indicated by the lack of inflection and the capitalisation of nouns and adjectives inside a name string. On the other hand, the "words" in (2) and (3) incorporate pronouns – enclitic ("post-word") and mesoclitic ("in-word"), respectively - that need to be isolated as bearers of syntactic function (objects).

A glance at a list of Portuguese conjunctions reveals a majority of complex words like (5) and (7), that in theory would allow further syntactic analysis, but usually are regarded as smallest units of syntactic form. For complex prepositions (6), the internal form of such units is typically that of **adv+prp**, or **prp+np+prp**, with the last preposition valency governing the complex preposition's argument.

Often, words are not assigned a *form* category at all, and word class is derived from syntactic function – as when calling 'como' for all of adverb, conjunction and preposition, depending on its being used as adverbial, fcl-subordinator or acl-subordinator ("pp"). Similarly, adjectives are often assigned noun class when functioning as (head of) subject or object ('um dinamarquês'), and nouns are tagged adjectives, when they appear postnominally ('um político pacifista').

In this approach, Portuguese word classes *will* be regarded as form categories and defined primarily by morphological criteria, in particular by inflexion category inventory. Thus, nouns, proper nouns, adjectives and (cardinal) numerals feature number and gender, but while both these categories are **word form categories** for adjectives (i.e., freely inflecting for the individual word), only number is "free" in nouns, whereas gender is a **lexeme category** to be derived directly from the lexicon, i.e. fixed for the individual word. For numerals, the inverse is true: gender is a word form category ('duas'), while number is a lexeme category, i.e. fixed – as might be

expected for semantic reasons ... In the case of proper nouns, finally, both gender and number are lexeme categories.

Pronouns can be subdivided morphologically by the same criteria³¹: determiner pronouns (pron-det: 'estas', 'seus', 'cuja') inflect like adjectives, while independent pronouns (pron-indp: 'nada') inflect like proper nouns, i.e. they don't. Personal pronouns are morphologically special in that they also inflect for person and case. Articles *should*, along this line of reasoning, form part of the determiner pronoun class, but will be distinguished for reasons of grammatical tradition.

Finite verbs are easily defined morphologically due to their characteristic combination of inflection categories (person, number, tense, mode). From this perspective, it is the finite verbs that are the "true" verbs, while the non-finite verbal subcategories could logically be subdivided as "substantival" infinitives (inflecting for number and person, but not gender), "adjectival" participles (word form inflecting for both number and gender) and, finally, "adverbial" gerunds (without gender or number).

For adverbs (with the exception of '-mente'-adverbs), prepositions, conjunctions and interjections, morphological word class criteria are difficult or impossible to establish – barring closed word lists, and they might therefore be lumped together in one "particle" class. However, as a tribute to grammatical compatibility with other systems of analysis, the traditional categories (and syntactic definitions) have been maintained for these cases.

symbol	category	examples
n	noun nome substantiv (nomen)	árvores n (F P) um oitavo n (<num> M S)
prop	proper noun nome próprio proprium (egenavn)	Estados=Unidos prop (M P) Dinamarca prop (F S)
adj	adjective adjetivo adjektiv	belas adj (F P) terceiros adj (<num> M P)
num	numeral numeral numeralia	duas num (F P) 17 num (<cif> M P)

³¹ Syntactically, pronouns are sometimes divided into two categories, "substantival" and "adjectival". The first is used when pronouns occur on their own (i.e. not as part of a group) or as head of an np, while the second is employed where pronouns enter np's as adnominal dependents, with determiner function.

The traditionally most widely used list of subcategories for pronouns, however, is primarily semantic:

SEMANTIC CATEGORY	SYNTACTIC CATEGORY	MORPHOLOGICAL C.	EXAMPLES
1. personal pronouns	substantival	pron-pers	mim, tu, me
2. possessive pronouns	adjectival, rarely substantival	pron-det	suas, minha
3. demonstrative pronouns	adjectival, rarely substantival	pron-det	estas, aquele, isto
4. interrogative pronouns	substantival, adjectival	pron-indp, pron-det	quem, quando
5. relative pronouns	substantival, 1 adjectival ('cujo')	pron-indp, 1 pron-det	que, cujo, quando
6. indefinite pronouns	substantival, adjectival	pron-indp, pron-det	muito, nada, alguém

The last class (indefinite pronouns) corresponds roughly to what in other systems would be called quantifiers.

v	v-fin	finite verb verbo finito finit verbum (bøjet i tid)	fizessem v-fin (IMPF 3P SUBJ)
	v-inf	infinitive infinitivo infinitiv	fazermos v-inf (1P)
	v-pcp	participle particípio participium	comprados v-pcp (M P) [attributive] tem comprado v-pcp [verbal]
	v-ger	gerund gerúndio gerundium	correndo v-ger
art		article artigo artikel	os membros art (<artd> M P) [definite] uma criança art (<arti> F S) [indefinite]
pron	pron-pers	personal pronoun pronome pessoal personligt pronomen	mim pron-pers (1S PIV) tu pron-pers (2S NOM)
	pron-det	determiner pronoun pronome determinativo determinativt pronomen (adjektivisk pronomen)	estas pron-det (<dem> F P) [demonstrative] muita pron-det (<quant> F S) [indefinite] cujos pron-det (<rel> M P) [relative] quantos pron-det (<interr> M P) [interrogative] minhas pron-det (<poss 1P> F P) [possessive]
	pron-indp	independent pronoun pronome independente independent pronomen (substantivisk pronomen)	isto pron-indp (<dem> M S) [demonstrative] algo, nada pron-indp (<quant> M S) [indefinite] os=quais pron-indp (<rel> M P) [relative] quem pron-indp (<interr> M S) [interrogative]
adv		adverb advérbio adverbium	facilmente, devagar adv [modals] aqui, lá adv [pronominals] muito, imensamente adv [intensifiers] onde, quando, como adv [relatives or interrogatives] não, até, já adv [operators]
prp		preposition preposição preposition	contra prp em=vez=de prp <c>
in		interjection interjeição interjektion	oi! in
conj	conj-s	subordinating conjunction conjunção subordinativa underordnende konjunktion	que conj-s embora conj-s
	conj-c	coordinating conjunction conjunção coordenativa sideordnende konjunktion	e conj-c ou conj-c
pu		punctuation pontuação tegnætningstegn	, pu [komma]

Alphabetical index:

In this alphabetical index, page numbers that refer to definitions or major sections, are in bold face, page numbers for tables or illustrations are in italics.

A

A, **14**
 ablativus absolutus, **69**
 absolute participle constructions, 69
 ACI, **75**
 acl, **60, 72**
 adjective predicative, **43**
 adjective phrases, 46
 adjectives
 premodifier vs. postmodifier, 39
 adjectives, **37**
 predicative adjectives, 43
 adjp, 46
 adjunct objects, **19**
 adjunct predicatives
 vs. adjective predicatives, 43
 adjuncts, 11, **17**
 table, **22**
 vocative adjuncts, **20**
 adnominal modifiers, 39
 adpositional phrases, **46**
 adverb phrases, 46
 adverbial finite subclauses, 62
 adverbial non-finite subclauses, 64
 adverbials, **14**
 argument adverbials, **14**
 free adverbials, **17**
 adverbs
 conjunctive adverbs, 83
 in complex prepositions, 48
 intensifier adverbs, 46
 manner adverbs, 47
 operator adverbs, 44
 time operators, 47
 advp, 46
 AG, **24**
 agent, 24
 agent of passive, **21**
 Ao, **14**
 ap, 11, **37, 46**
 apposition, **43**
 argument adjectives, 37
 arguments, 11
 form, **15**
 in noun phrases, 41
 of adjectives, 48
 of preposition, 50
 table, **16**
 As, **14**
 attitudinal adverbials, 20
 attributive finite subclauses, 62
 attributive participles, **67**
 AUX<, **35**
 auxiliaries, **33**
 auxiliary complement, **35**
 auxiliary subordinator, **34**
 avaluation adverbs, 44
 averbal clauses, **60, 72**
 averbal utterances, **73**

B

BEN, **24**
 benefactive, **24**
 beneficiary, 24

C

case roles, **24**
 causative verbs, 75
 causatives, **75**
 CJT, 81
 clause
 definition, 29
 clause body constituent, 86
 clause header, 28, 59
 clause level adjuncts, **17**
 clause level arguments, **13**
 clause level function, **13**
 clause types, **58**
 table, **60**
 clauses
 finite subclauses, **61**
 vs. big verb phrases, 58
 clauses vs. groups, **11**
 Co, **14, 81**
 cognitive verbs, 15, 61
 Co-icl
 vs. Oacc-icl, 77
 com, 96
 as subordinator, 52
 command, 96
 como
 word class, 31
 comparandum, 88
 comparative degree, 90
 comparative kernel, 88
 comparative subordinator, 30
 comparatives, **88**
 comparisons
 equalitative vs. correlative, 88
 competence, 27
 complementizer, 28, **59**
 complements, **14**
 object complement, **14**
 subject complement, **14**
 complex heads
 in co-ordination, 82
 complex prepositions, 48
 conjunct, **81**
 conjunction
 conjunctive adverbs, 83
 conjunctions
 co-ordination, 83
 subordinating conjunctions, 28
 word class problems, 54
 constituent
 definition, **10**
 Constituent Grammar, **6**
 constituent omission test, **17**
 constituents

in averbal clauses, 30
 zero constituents, 30
 Constraint Grammar, 7
 enriched CG, 8
 flat dependency notation, 9
 contra-junction, 83
 co-ordinated unit, **81**
 co-ordination, **81**
 and syntactic ambiguity, 82
 stacking, 85
 table, **87**
 co-ordinator, **81**
 co-ordinators
 as clause level constituents, 83
 copula, **14**
 copula constructions, 98
 copula verbs, 58
 Cs, **14**
 cu, **81**

D

DA, **46**
 DA-com, 88
 DApiv, 47
 dative objects
 in transobjective constructions, 78
 definite article
 in superlative constructions, 92
 Dependency Grammar, **5**
 with function labels, 7
 dependency markers, 7
 dependents, 37
 determiner phrases, 46
 determiner pronouns
 as postmodifier, 39
 detp, 46, **55**
 Dfoc, **45**
 in pp's, 51
 verbal focus markers, 102
 DIR, **24**
 direction, 24
 disjunct constituents
 DA, 46
 predicator, 34
 disjunction, 83
 ditransitive, **14**
 DNapp, **43**
 DNarg, **42**
 DNC, **43**
 DNmod, **42**
 DP, **50**
 DParg, 50
 DPmod, 50
 DAa, 47

E

é
 as focus marker, 102
 ellipsis, 30
 embora
 as acl-header, 72
 enclitic pronouns, 59
 endocentric groups, 37
 ergative, **14**
 ergative verbs
 and participles, 69
 and subject placement, 98
 EXC, 96

exclamation, 96
 exercises
 clause level constituents, **22**
 exocentric groups, 37
 EXP, **24**
 experiencer, 24

F

fA, **17**
 fAo, 17
 fApass, **21**
 fAs, 17
 fC, **17**
 fcl, **58**
 fCo, 17
 fCs, 17
 fCsta, **20**
 fCvoc, **20**
 finite clauses, **58**
 finite subclauses, **61**
 FOC>, 101
 focus, **98**
 focus marker, **101**
 in groups, **45**
 fOdat, **19**
 fOpiv, **19**
 form
 group form, 37
 morphological form, **4, 106**
 syntactic form, **4**
 word vs. group vs. clause, 58
 form and function, **4**
 free adverbials, **17**
 free objects, **19**
 as topic place holders, 104
 free predicatives, **17**
 function
 group level constituent function, 37
 morphological function, **4**
 syntactic function, **4**

G

gerund clauses, 58
 gerund subclauses, **64**
 vs. ACI-constructions, 64
 group
 definition, 37
 meta-groups, 45
 group constituents
 table, **57**
 group types
 examples, **38**
 list, **10**
 table, **37**
 groups, **37**

H

head vs. dependent, 8
 heads, 37
 complex heads, 41
 hooks
 in comparisons, 88
 hypotactic groups, 37

I

icl, **58, 63**
 participle icl's, 68
 imperative
 addressee, 21
 inclusive, 48
 index, **109**
 infinitive clauses, 58
 infinitive subclauses, **63**
 INSTR, **24**
 instrument, 24
 interrogatives
 interrogative subclause, 61
 intransitive, **14**
 intransitive verbs
 and participles, 69
 isolation test, **17**

K

katatactic groups, 37
 kryds og bolle, 5

L

lexeme category, 106
 LOC, **24**
 locative, 24

M

matrix verbs, **75**
 meta-words, 56
 modifier adjectives, 37
 modifiers, 11
 nouns or proper nouns, 40
 ordinary vs. operators, 44
 monotransitive, **14**

N

name chains
 left leaning analysis, 40
 names, **40**
 negation adverbs, 44
 nexus, **58**
 in co-ordination, 83
 predications without nexus, 58
 preposition mediated, 52
 without a predicator, 53
 nominal finite subclauses, 61
 nominal non-finite subclauses, 63
 non-finite clauses, **58**
 non-finite subclauses, **63**
 non-terminal nodes, **6**
 noun phrase, **39**
 definition, 8
 nouns
 deverbal nouns, 41
 np, 11, **37, 39**
 numbers
 as arguments of nouns, 42

O

Oacc, **13**
 icl vs. Co
 icl, 64

reflexive Oacc as S, **25**

Oacc-icl
 vs. Co-icl, 76
 object predicatives, 59
 objects, **13**
 adverbial objects, **14**
 dative object, **13**
 direct object, **13**
 prepositional object, **13**
 Odat, **13**
 in transobjective constructions, 78
 omission test, **17**
 operator adverbs, **44**
 before pp's, 50
 in pronp's, 55
 operator modifiers, 44, 47
 Opiv, **13**
 tagged as Odat, **24**
 ordinal numbers, 43

P

P, **33**
 paratactic groups, 37
 participle clauses, 58
 participle subclauses, **67**
 participles
 absolute participle constructions, 69
 adjectival participles, 47
 adjectival vs. verbal use, 67
 in verb chains, **68**
 predicative vs. absolute, 70
 vs. adjectives, 67
 passive
 action passive vs. state passive, **68**
 s-passive, 26
 PAT, **24**
 patient, 24
 pending topic, 104
 performance, 27, 68
 phrases, **37**
 postmodifiers
 in ap's, 46
 in np, 39
 postnominal attachment, 83
 pp, **37, 50**
 predicate, **58**
 predicate isolation test, **17**
 predicating, 33
 predication, 33, **58**
 predicative subordinator, 30
 predicatives, **14, 58**
 adject predicatives, 43
 adjunct predicatives vs. absolute participles, 70
 free, **17**
 pp's as predicatives, 52
 statement predicative, **20**
 predicator, **13, 33, 58**
 complex predicators, 33
 disjunct predicators, 34
 zero predicator, 30
 premodifiers
 in ap's, 46
 in np, 39
 prepositional phras, **50**
 prepositions
 as subordinators, 31
 as valency linkers, 50
 complex prepositions, 106
 in adjective valency, 48

in noun valency, 42
 subordinating gerund subclauses, 65
 vs. comparandum header, 89
 word class vs. function category, 54
 pronominal verbs, 25
 pronoun fronting
 in transobjective constructions, 79
 pronoun phrase, **55**
 pronouns
 determiner pronoun vs. adjective, 39
 enclitic pronouns, 59
 impersonal pronoun, 27
 independent pronouns as premodifiers, 46
 reflexive pronoun, **25**
 relative pronouns, 28
 substantival pronoun groups, 45
 pronp, **55**
 proper nouns
 in name chains, 40
 punctuation
 and utterance function, 96

Q

quando
 as acl-header, 72
 que, 96
 as auxiliary subordinator, 35
 in comparisons, 88
 in focus constructions, 100
 que-clauses, 61
 question, 96

R

reflexive pronoun, **25**
 relative adverbs
 in comparisons, 88
 relative pronouns, 28
 relatives
 as comparative subordinators, 73
 rewriting rules, 6

S

S, **13**
 se, **25**
 selection restrictions, **15**
 sem
 as subordinator, 52
 semantic function, **24**
 sense-verbs, 75
 sentence
 definition, 4
 set inclusion adverbs, 44
 source, 24
 SRC, **24**
 STA, 96
 stacking
 in co-ordination, 85
 state passive, 68
 statement, 96
 statement adjunct, **20**
 statement predicative, **20**
 SUB, **28**
 SUB<, **28**, 60, 72
 as comparandum body, 90
 in co-ordination, 86
 SUBaux, **34**

SUBcom, **30**, 73
 SUBfoc, 103
 subject, **13**, 58
 agent vs. patient in ablativus absolutus, 69
 as surface object, 75
 reflexives as subjects, **25**
 topic subject placement, 98
 vs. object in transobjective construction, 75
 subject complement
 with state passives, 68
 subjunctive
 in comparisons, 91
 subordinating conjunctions, 28
 subordination, **28**
 focus subordinator, 103
 subordinators
 auxiliary subordinator, 34
 com and sem, **52**
 comparative, 30
 predicative, 30
 prepositions, 31
 table, **32**
 SUBprd, **30**
 substitution test, 14
 superlative
 analytic vs. synthetic, 91
 syntactic ambiguity
 in co-ordination, 82
 underspecification in CG, 82
 syntactic function
 vs. semantic function, **24**

T

tão, 94
 ter
 + participle, 68
 ter/haver
 and gerund subclauses, 65
 terminal nodes, **6**
 tests
 constituent omission test, **17**
 predicate isolation test, **17**
 TH, **24**
 theme, 24
 Topic and focus constructions, **98**
 topicalization
 fronting, 104
 pending topic, 104
 transitive, **14**
 transitive verbs
 and participles, 69
 transobjective, **14**
 transobjective constructions, **75**

U

UTT, **96**
 utterance, 59
 utterance function, **96**
 table, **97**
 utterances
 averbal utterances, 73

V

valency, **11**
 and participle options, **69**
 at group level, 37

of adjectives, 48
of adverbs, 48
valency patterns, **14**
verb chains, **34**
 participles, **68**
verb phrases, 33
verbal constituents, **33**
 table, **36**
verbs
 auxiliaries, 33
 causative verbs and ACI, 75
 matrix verbs, **75**
 pronominal verbs, 25
 sense-verbs and ACI, 75
vocative adjuncts, **20**
vp, 11, 33, **37**, 58

W

word class
 form vs. function, 106
word classes, **106**
 list, **10**
 table and examples, **107**
word form category, 106
word order
 in topic and focus constructions, 98
words
 definition, 4, 106

Z

zero constituents, **5**, 30
 in acl's, 73
zero-constituents
 in co-ordination, 85