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THE SYNTAX OF COMMAS: An analysis of two types of parentheticals

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Introduction:
It is well-known that certain structures – such as parentheticals, *as* clauses, non-restrictive relatives, nominal appositives, etc. – have a special status syntactically, semantically and phonologically (among the many others, see for recent analyses Selkirk 2005, Burton-Roberts 2005, Potts 2002, 2005, Cinque 2007). These clauses, or phrases, seem to 'combine' with the rest of the sentence without really 'being part' of it – hence, the term *supplements* (Potts 2002). Moreover, they are characterized by a special intonational contour, the so-called *comma intonation* (Selkirk, 2005).
Traditionally, supplements have been analyzed as syntactic units that are structurally independent from the surrounding sentence. Two main accounts have been developed in the literature:
A. supplements are totally external to the syntactic structure of their host, as a sort of three-dimensional tree (Espinal 1991, Burton-Roberts 1999).
B. supplements are adjoined to the host, for instance right-adjoined as in Potts (2002, 2005).
I will argue here that both proposals A and B are unsatisfactory. Proposal A faces some obvious problems for defining a linearization hypothesis following from such a non-canonical view of phrase structure. Proposal B gives rise to syntactic trees that cannot be linearized in the Linear Correspondence Axiom framework developed by Kayne (1994). Though Kayne's (1994) algorithm for linearization might be not the only one available in a generative framework, it has the advantage of a very strong heuristic power, given that it can also explain several word order asymmetries in the languages of the world (see also Chomsky 2005). Therefore, I will assume it here.
I will propose a solution to the linearization problem, capitalizing on the basic philosophy of the minimalist approach, according to which there is only one syntactic representation to be read off at the interfaces. Languages in fact must satisfy two sets of interface conditions: those of the Sensorimotor system S-M, and those of the Conceptual-Intentional system C-I (Chomsky, 1995, 2005). In this work I will consider both interfaces, and propose that the syntactic representation I'm going to present yields the correct results, both with respect to the interpretation and with respect to the prosodic realization of the structures I analyze.
In this approach there is no *deus-ex-machina*, telling us at a later stage of the derivation how a specific structure must be pronounced and interpreted. On the contrary, in this perspective, all the relevant information must be derivable only from the syntactic representation.

The topic of this work:
In this work I discuss in particular two kinds of supplements, which have not been considered in this light yet, namely, the *introducing predicates* of Quotation (**Qu**) – i.e., Direct Discourse – and of Free Indirect Discourse (**FID**). These supplements are represented in boldface in the following examples:

(1) "Mary is happy today", **John said yesterday**. (Qu)
(2) It was, **he now realized**, because of this other incident that he had suddenly decided to come home and begin the diary today. [Orwell,*1984*,ch.1]. (FID)

These supplements will be shown to be *root* phenomena. They exhibit some idiosyncratic properties, though sharing with other kind of supplements the *comma intonation*.
I selected these peculiar types of parentheticals, because they are interesting both form the point of view of their interpretive properties and from the point of view of the prosody, as I will point out below.

The hypothesis of this work:
The basic issue addressed in this work, as I already mentioned above, concerns the linearization of the parenthetical structures, in order to obtain the typical intonational contour (Selkirk's *comma intonation*). The idea I will develop is that the relevant information must be present in the syntax. Hence, in the spirit of Kayne's (1994) Linear Correspondence Axiom (LCA), I propose that the long pause – the *comma,* ***K*** –projects a constituent, ***KP***.
This way, an intermediate head, K, occurs between the parenthetical structure and the rest of the clause – no adjunction needs to be hypothesized – and the c-command relations are accordingly asymmetric.
In other words, I propose that the syntax combining a supplement and its host is in all respects identical to the syntax of clauses, the only difference being the relevant head. A clause is headed by the complementizer C – which, as shown by Rizzi (1997), is actually a syntactic *layer* – whereas a parenthetical is headed by K, spelled out as a *pause*.
Furthermore, I propose that the constituent KP, projected by the head K, appears at the left of the so-called *left-periphery*, and plays a crucial role in the interface with the context. As a corollary, therefore, note that a KP takes a "normal" clause as its complement.
I then argue in favor of a possible extension of this account to vocatives and exclamatives, and claim that it could also explain some observations concerning the non-root, ordinary, supplements, such as for instance *as*-clauses. Note also that this analysis is a natural development of Selkirk's basic intuition concerning the close correspondence between syntax and intonation.
This proposal might also constitute an improvement both with respect to the account of the phenomena at issue, and with respect to theory of the syntactic structure, in particular when considering the left periphery and its C-I interface role.

Summary of the theoretical proposal:
- Linear Correspondence Axiom: linear precedence reflects asymmetric c-command.
- **Comma is a head, K, and projects a constituent**. The sentence is its *complement*, in a structural sense. Therefore, a certain degree of 'permeability' is expected, which will be qualified in precise syntactic terms in the analysis. Also, this proposal immediately accounts for the *gap effect* – i.e., the fact that a sequence such as *John said /thought* etc, which is normally ungrammatical, is perfectly acceptable in these contexts.
- BUT there is no *subordination relation* between KP and CP, due to the nature of the head K, which is **not** a complementizer (note that KP and CP must be understood as *layers*, i.e., as a hierarchically ordered set of syntactic projections).
- According to this proposal, there is **no** need for three-dimensional trees, nor for adjunction (or insertion, cf. deVries, 2007).

Exemplification:
Consider in this light the following examples – FID and Qu, respectively – with the corresponding structures. Let's consider a FID example first:

(3) The new ration did not start till tomorrow and he had only four cigarettes left, *Winston thought* (adapted, Orwell, *1984*, ch. 5)

(4) [$_{KP}$ **K** [$_{CP}$ *Winston thought* [$_{KP}$ **K** [$_{CP}$…]]]]

According to the hypothesis presented here, the whole sentence – *the new ration,* etc – is the complement of the KP. The parenthetical – *Winston thought* – is syntactically embedded in

between two Ks, spelled out at the interface as pauses. The host is indeed the complement of *thought*, hence there is no violation of grammar in this respect, in the sense that there is no unpredictable instance of an intransitive *think*, which would be normally starred, as in the following case:

(5) *John thought.

Example (5) is normally ungrammatical, because *think* requires a complement.

Consider now the case of Quotations:

(6) I will leave tomorrow, *John said yesterday*

(7) [$_{KP}$ **K** [$_{CP}$ *John said yesterday* [$_{KP}$ **K** [$_{CP}$…]]]]

The structure proposed for this case is the same as the one given above. The supplement – *John said* – appears in between Ks, and the quoted clause is its complement. Analogously to the previous case, in this example as well there is no special assumption to be made for the apparent intransitive usage of the verb *say*. The host is in fact its complement and no further consideration is needed.

The actual word order of sentences in (3) – FID – and (6) – Qu – is derived via topicalization of the rest of the sentence in the positions available in the KP-layer.

Other orders would also be possible, with different topicalizations. Consider for instance the following case:

(8) The new ration, *Winston thought*, did not start till tomorrow and he had only four cigarettes left (adapted, Orwell, *1984*, ch. 5)

(9) [$_{KP}$ [the new ration]$_i$ **K** [*Winston thought* [$_{KP}$ **K** [$_{CP}$ t$_i$…]]]]

The same holds for quotations:

(10) I, *John said yesterday,* will leave tomorrow

(11) [$_{KP}$ I$_i$ **K** [*John said yesterday* [$_{KP}$ **K** [$_{CP}$ t$_i$⋯]]]]

A variety of different properties and constructions easily follows from this basic proposal, both in the syntax and in the interpretation.

With respect to this latter point, an analysis of the properties of tenses and indexicals in FID and Qu will be (briefly) provided in the next section.

The role of the left periphery and KPs:

Giorgi (2010) proposed that the left-most position in the left periphery, C-speaker, contains the temporal and spatial coordinates of the speaker. These coordinates are essential for the interpretation of tenses and for the interpretation of indexicals. The mechanism involved in these cases is (over or covert) movement of the verb from V to T, to the left most position in C, i.e., C-speaker. This movement is responsible, among other things, for sequence of tense in main and embedded clauses and for the so-called Double Access Reading phenomena.

It can be shown also that the presence of C-speaker is not dependent on verbal morphology in itself, as it is possible to check its effects even in languages with no tense morphology on the verb, such as Chinese (see Giorgi, 2006).

Interestingly, it can be observed that both the contexts created by Free Indirect Discourse and Quotations require the resetting of the speaker's temporal (and spatial) coordinates. The speaker's coordinates are substituted by the internal source's location, i.e., by the coordinate of the subject appearing in the supplement – *Winston* and *John*, respectively, in the examples given above.

The hypothesis I will develop here, is that the resetting is due precisely to the presence of the supplement, i.e., the KP.

According to the proposal above, in fact, the KP appears at the left of the left periphery. It is already known that the C-layer defines the interpretive coordinates relevant for the clause on its right. Analogously, I propose here that a (root) KP defines the coordinates relevant for the syntactic structures on its own right. In other words, the KP identifies the pivot according to which the indexical items – tenses, pronouns etc – are interpreted in the host clause.

Some possible extensions:

The analysis proposed above can be extended to other cases as well.

A possibility could be to extend it to vocative contexts, which, though not parenthetical, have several properties in common with the structures considered here. For instance, vocatives have a special intonational contour and are not integrated with the rest of the sentence, resembling therefore supplements. Moreover, vocatives are a root phenomenon as well, and their distributional properties are very similar to those of FID and Qu (cf. Moro 2003).

The derivation by means of topicalization to the left could be taken to be analogous to what seen above:

(12) Gianni, *o Maria*, aiuta i ragazzi
Gianni, *o Maria*, helps the boys

(13) $[_{KP}$ **K** [*o Maria* $[_{KP}$ **K** [$_{CP}$…]]]]

Where *Gianni* is topicalized to the left of the higher head K.

Exclamative sentences could also be viewed in this light, again sharing with the previous cases the fact of having a peculiar intonational contour and of being a root phenomenon. The relevant head in this case could be a specific exclamative head "!". The structures could be derived by means of movement of the CP to the left of *!P*.

(14) John won the race!

(15) $[_{!P}$ **!** $[_{CP}$John won the race]]

Finally, the analysis presented here could be extended to embeddable KPs, i.e., to the *as*-clauses discussed by Potts (2002, exx.42 and 43):

(16) Alan claimed that cryptography is a blast, as you mentioned. *Ambiguous*

(17) Alan claimed that, as you mentioned, cryptography is a blast. *Non-ambiguous*

As signaled above, the example in (16) is ambiguous, whereas the one in (17) is not.

In my framework, the status of (16) and (17) can be derived by means of the following structures, exactly as discussed with respect to the cases of FID and Qu, the only difference being the non-root status of *as*-clauses:

(18) $[_{KP}$ **K** [*as*-clause $[_{KP}$ **K** [$_{CP}$…]]]]

(19) $[_{CP}$ $[_{KP}$ **K** [*as*-clause $[_{KP}$ **K** [$_{CP}$…]]]]

The *as*-clause in (19) is embedded in a CP, whereas the one in (18) is not. The example in (16) can be derived either starting from (18) or from (19). The example in (17) can only be derived starting from (19).

References:

Burton-Roberts, N. 2006. Parentheticals. In Keith Brown (Ed. in chief), *Encyclopaedia of language and linguistics*, Elsevier, vol. 9, 179-182.

Cinque, G., 2007, Two Types of Non-restrictive Relatives, *ms*., Univ. of Venice (to appear in Proceedings of the Colloque de Syntaxe et Semantique de Paris 2007).

Chomsky , N., (1995), *The Minimalist Program*, The MIT Press, Cambridge MA,

Chomsky, N, Three factors in Language Design, *Linguistic Inquiry*, 36,1,pp. 1–22.

Dehé, N., 2009, Clausal parentheticals; Journal of Linguistics 45.

Espinal, M. T. 1991. The representation of disjunctive constituents, *Language* 67(4), 726-762.

Giorgi, A., 2006, From Temporal Anchoring to Long Distance Anaphors, *Natural Language and Linguistic Theory*, 24,4,1009-1047.

Giorgi, A., 2010, About the Speaker: Towards a syntax of indexicality, Oxford University Press.

Kayne, R., 1994, *The Antysimmetry of Syntax*, Oxford University Press.

Moro, A. 2003, Notes on Vocative Case: A Case Study in Clause Structure, in J. Quer et Al. (eds.), *Romance Languages and Linguistic Theory*, John Benjamins, pp. 247–261.

Potts, C. 2002. The syntax and semantics of as-parentheticals. *Natural Language and Linguistic Theory*, 20(3), 623-689.

Potts, C. 2005. The logic of conventional implicatures. Oxford University Press.
Selkirk, E. 2005. Comments on intonational phrasing in English. In S. Frota et Al. (eds.), *Prosodies, with special reference to Iberian languages*, Mouton de Gruyter, pp. 11-58.
deVries, M. 2007. Invisible constituents? Parentheses as B-merged adverbial phrases. In: Dehé & Kavalova (eds.), *Parentheticals*, John Benjamins. pp. 203-234.