Unbounded Iteration in Coordination and the Copy Theory of Movement

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This talk will propose that the unbounded iterativity of coordinate structures can and should be naturally captured by the current copy theory of movement (Chomsky 1995). Following Zoerner (1995), I will first propose that coordination involves a structure of the form (1), where the Co(ordinator)-head iteratively move to the edge and project as many times as there are coordinand XPs (call this process *Co-iteration*).

(1) $\{Co_i, \{AP, \{Co_i, \{BP, ...\{Co_i, \{YP, \{Co_i, ZP\}\}\}...\}\}\}\}$

The iteration of copies of Co is proposed by Zoerner to capture (i) the unbounded nature of coordinand iteration within coordination, and (ii) the availability of (optional) multiple pronunciation of the coordinator particle, as in (2).

(2)   a. John will criticize [$_{CoP}$ Mary (and/or) Bill (and/or) Sue and/or Tom].
        b. John will [$_{CoP}$ criticize Mary (and/or) praise Bill (and/or) himiliate Sue and/or admire Tom].

I further claim that Co-iteration within CoP is in fact necessitated by the last resort principle of syntactic derivations. Due to the Full Interpretation (FI) condition at the SEM interface, all the coordinand XPs must receive some appropriate θ-role before reaching SEM. However, CoP is a structure that embeds the would-be-θ-marked coordinands into its Specs and complement, and thus remove them from the very θ-position that it occupies. Nevertheless, one of the obvious properties of coordination is that each and every coordinand XP equally receives one and the same θ-role that is assigned to the position occupied by the entire CoP. I claim that this result is achieved by Co-iteration. Note that Co is the head of CoP, thus it receives a θ-role that is discharged to the position occupied by CoP. Note also that each coordinand is associated with a copy of Co. I claim that, due to the very fact that these copies are occurrences of one and the same Co, once the topmost occurrence of Co receives a θ-role, all the other occurrences of Co come to be equally associated with this θ-role, as in (3).

(3)   a. V $\{Co_i, \{AP, \{Co_i, \{BP, ...\{Co_i, \{YP, \{Co_i, ZP\}\}\}...\}\}\}\}$
             θ-marking
        b. V $\{Co_{i\theta}, \{AP, \{Co_{i\theta}, \{BP, ...\{Co_{i\theta}, \{YP, \{Co_{i\theta}, ZP\}\}\}...\}\}\}\}$

After this θ-role assignment to the iterated Co, syntax cyclically Transfers each set of $\{Co_{i\theta}, XP\}$ from bottom-up.

(4)   a. Transfer $\{Co_{i\theta}, ZP\}$: $\{Co_{i\theta}, \{AP, \{Co_{i\theta}, \{BP, ...\{Co_{i\theta}, \{YP, \cancel{\{Co_{i\theta}, ZP\}}\}\}...\}\}\}\} \Rightarrow$
                 $\{Co_{i\theta}, \{AP, \{Co_{i\theta}, \{BP, ...\{Co_{i\theta}, YP\}...\}\}\}\}$
        b. Transfer $\{Co_{i\theta}, YP\}$: $\{Co_{i\theta}, \{AP, \{Co_{i\theta}, \{BP, ...\cancel{\{Co_{i\theta}, YP\}}...\}\}\}\} \Rightarrow$
        :
        c. Transfer $\{Co_{i\theta}, BP\}$: $\{Co_{i\theta}, \{AP, \{Co_{i\theta}, BP\}\}\} \Rightarrow$
                 $\{Co_{i\theta}, AP\}$
        d. Transfer $\{Co_{i\theta}, AP\}$.

I claim that SEM treats each of the Transferred sets of the form $\{Co, XP\}$ as an instance of small clauses, and as a result, each coordinand XP is associated with the θ-role by predication of a θ-related copy of Co. Thus, our analysis posits that Co-iteration, enabled by the copy theory of movement, is crucially responsible for multiple θ-role assignment to coordinands.

Further, note that each application of Transfer ships a head-complement structure of the form $\{Co, XP\}$, assuming here that $\{\alpha\} = \alpha$, as $\{YP\} = YP$ in (4a). I claim that this is the reason why the coordinator-coordinand linear order correlates with the head-parameter value of the language in question: thus, a coordinator forms a phonological unit with the coordinand to its right in head-initial languages, while it does so with the coordinand to its left in head-final languages, an observation made by Zoerner (1995). His examples are from English and Japanese.

(5)   a.   Robin, and Kim, like apples.
       b. *Robin and, Kim, like apples.
(6)   a.   [Hanako-to, Naoko]-wa kawai-i.
          Hanako-and Naoko -ᴛᴏᴘ pretty-ᴘʀᴇs
          "Hanako and Naoko are pretty."
       b. *[Hanako, to Naoko]-wa kawaii.

Finally, I claim that this analysis of CoP rationalizes the so-called right node raising (RNR) structure as an instance of *sideward remerge* (Nunes 2001). Abels (2004), Wilder (2008) and many others already claimed that the RN should be analyzed as a node with multidominance, basing their argument on (i) the lack of island effects for RNR (7), (ii) the availability of nonconstituent RNR (8), and (iii) the availability of RNR of constituents that are otherwise immobile (9).

(7)   a.   I know a man who loves, and a woman who hates [London]
       b.   I was at home before John came from, and after Peter went to Leiden
(8)   John borrowed, and Mary stole [large sums of money] [from the Chase Manhattan Bank].
(9)   a.   John asked when, but he didn't ask why [Mary left].
       b.   I like expensive, and you like cheap [dresses].
       c.   His theory under- and her theory over-[generates].

These data are as expected, if sideward remerge/multidominance suffices to give rise to RNR. However, one problem common to the previous multidominance accounts is that they don't provide an explanation for why it is always the last conjunct within which the RN surfaces, despite the natural expectation that a node with multiple mother nodes should be able to surface at either mother's daughter position. I claim that our analysis gives a principled reason for this state of affairs. Note that in the proposed CoP structure in (1), all but the very last coordinand (ZP) occupy Spec(s) of Co. Basing the argument on the current proposal that all instances of Merge must take the form {H, XP} (corresponding to head-complement) and any noncomplement XP that deviates from this pattern must constitute their own phases (see Uriagereka 1999 for a proposal based on Kayne's 1994 LCA; see Narita 2009 for an LCA-free alternative), I claim that all but the last coordinand are required to be reduced to a bare phase-head lexical item (LI) (=the 'label') via cyclic Transfer/Spell-Out at the point of external merger to the CoP-structure. Then, sideward remerge, applying across the board within all coordinands, must always proceed from all nonfinal coordinands to the final coordinand to avoid the effect of the Phase-Impenetrability Condition (PIC) (Chomsky 2000), provided that the last coordinand is the only coordinand within CoP which can stay untransferred at the point of external Merge. Then, by the assumption that a chain is pronounced at the occurrence that is Transferred at the latest point in a given derivation, the chain of sideward remerge within CoP is to be pronounced within the last coordinand as expected. Further, if this sideward-remerged element is further moved out of CoP, it would give rise to the ATB movement of Nunes' (2001) kind, a welcome result.

The overall proposal is that the adoption of the copy theory of movement provides a principled account of coordination, or more specifically its unbound iteration of Co and coordinands, multiple θ-role assignment to coordinands, availability of RNR as sideward remerge and so on, without any further stipulation like feature-percolation. Under this account, unbounded iteration in coordination ceases to be a mysterious cluster of exceptions, and it is rather recast as one of ready-made expressive potentials that the copy theory of movement naturally provides.