The Fine Structure of the vP Periphery and Heavy NP Shift / Locative Inversion

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This research attempts to pursue the parallelism between CP and vP by examining intervention effects between a *wh*-phrase and a focus/topic phrase.   Examples in (1) show that a topicalized phrase blocks *wh*-movement.   Note that *wh*-extraction from a topicalized phrase in (1b) is better than *wh*-movement over a topic phrase in (1a).   On the other hand, a *wh*-phrase can move over a focus phrase as in (2a) or move out of a focus phrase as in (2b).

(1) a. * [Which books]$_i$ did Lee say that, [to Robin], she will give t_i?

   b.??Who$_i$ do you think [that pictures of t_i], John wanted?

(2) a.   [Which books]$_i$ did Lee say that [only with great difficulty] can she carry t_i ?

   b.   [Of whom]$_i$ did Robin say [only with children t_i] can he communicate?

In contrast with (2), focalization in the vP domain exhibits intervention effects in some cases. (3b) shows that in a Heavy NP Shift (HNPS) construction, *wh*-movement out of a focalized DP is impossible.   However, (3c) shows that *wh*-movement of another phrase in VP is allowed.   In Locative Inversion (LI) sentences as well, *wh*-movement of a focus DP as in (4b) and *wh*-movement out of a focalized DP as in (4c) is unacceptable, while *wh*-extraction from the remnant VP is acceptable as in (4d).

(3) a.   John sent to Horace an expensive book about horned frogs. (HNPS)

   b. * [About what kind of frogs]$_i$ did John send to Horace [an expensive book t_i]?

   c.   [For whom]$_i$ did Bill purchase t_i last week [an all expense paid ticket to Europe]?

(4) a.   Among the guests was sitting my friend Rose. (LI)

   b. * What$_i$ does John say that near his house lies t_i ?

   c.*?[What kind of mushrooms]$_i$ do you think on these trails can be found [specimens of t_i]?

   d.   [In which park]$_i$ did John say that under the palm tree stood t_i [an elegant fountain]?

Apparently, the contrast between (2) and (3)-(4) manifests the difference between CP and vP. However, we will demonstrate that these data in fact support the parallelism between the CP/vP domain.   Let us begin with CP.   Since multiple topicalization is disallowed in English, we propose to modify the fine structure of the CP periphery (Rizzi (1997)) as in (5).

(5) CP : [$_{ForceP}$ Force [$_{TopP}$ Top [$_{FocP}$ Foc [$_{FinP}$ Fin]]]]

Once we assume the fine structure (5), we must decide which head is the actual phase head.   We define phase heads based on predication, claiming ForceP and TopP are phases.   Given this, the complement of TopP is inaccessible from Force under the Phase Impenetrability Condition (PIC) (Chomsky (2001)).   This leads to the ungrammaticality of (1a).   (1b) is better than (1a) because in the former *wh*-extraction is from Spec, TopP and does not violate PIC.   Moreover, the grammaticality of (2) is attributable to FocP not being a phase; Force has free access to FocP and its complement.

Pursuing the idea that properties of the CP phase hold of phases generally, we propose the fine structure of the vP periphery (6), which contains phase heads AspP and TopP.

(6) vP : [$_{AspP}$ Asp [$_{TopP}$ Top [$_{FocP}$ Foc [$_{VoiceP}$ Voice]]]]

Further, refining the intuition by Kayne (1998), we claim that HNPS and LI involve focalization of DP and subsequent topicalization of remnant VoiceP to the vP domain.

(7) a. HNPS: [[$_{TP}$ John$_k$ [$_{AspP}$[$_{TopP}$ [$_{VoiceP}$ t_k sent t_i to Horace]$_j$[$_{FocP}$ [an expensive book about horned frogs]$_i$ t_j]]]]] (=(3a))

b. LI: [[$_{TP}$ Among the guests$_k$ [$_{AspP}$[$_{TopP}$ [$_{VoiceP}$ was sitting t_i t_k]$_j$ [$_{FocP}$ [my friend Rose]$_i$ t_j]]]]] (=(4a))

This claim successfully explains the restriction on *wh*-movement. In (3c) and (4d), a *wh*-phrase is in VoiceP, which is located in Spec, TopP in the vP domain. This position is accessible from the higher phase head, AspP, and hence the *wh*-phrase can be extracted and undergo successive movement to CP. In contrast, extraction of/from a focalized DP is ruled out in (3b) and (4b,c) because a focalized DP is located within FocP, which is the complement of TopP: a place Asp cannot see due to PIC.

In sum, a phase theory developed here accounts for the previously unexplained data regarding *wh*-extraction in focus constructions. We will also show that this claim naturally predicts the transitivity restriction in LI and that locative PPs are located in TP, not TopP, by examining various A′-movement data like (1a) and (4d).

References

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