

Phase and Convergence: A Preliminary Study

The aim of this research is to clarify some properties of “phase” based on observations of island effects of wh-questions. The main claims are the following two points: [1] the category qualified for phase is only CP, and it is identified by a “relative” procedure in terms of “convergence”, and [2] we no longer need to assume covert movement within the derivation under [1].

In the “derivational approach” adopted in Chomsky (2000, 2001a,b), it is assumed that phase is a unit for computation and that Spell-Out is applied phase by phase (cyclic spell-out). In his system, the phase is fixed for vP and CP in an “absolute” sense, which are determined in terms of “proposition”. However, Epstein and Seely (2002) points out that all of the propositions are not always qualified for phase. Another problem in Chomsky’s phase system is that the definition depends on semantics like proposition and that syntactic motivation for phase seems not to be enough. Moreover, it is not clear how to treat the “island effects” of movement in his system. In order to overcome these problems, I propose that phase is only CP which is convergent. CP is convergent iff every uninterpretable feature is checked and deleted in the CP. Therefore, as long as the CP has uninterpretable features, it cannot become a phase and is not Spelled-Out.

- (1) *What do you know [the man [who bought __]]?
- (2) Who knows [the man [who bought what]]?
- (3) C [who v [who bought what] → C you /who know the man [who [C [who v bought what]]
[+Q] [+wh] [+wh] [+Q] ([+wh]) [+wh]

In (1), *what* in the embedded clause is overtly moved to the matrix [Spec,CP] across the island. On the other hand, if the matrix clause has another wh-phrase as in (2), *what* has to stay at the original position. (3) is the derivations of (1)-(2) under the present system. First, the embedded [+Q] agrees with [+wh] of *who*. At this time, note that [+wh] of *what* still remains unchecked, because the embedded [+Q] is for a relative clause, not for a question. Therefore, the embedded CP cannot be convergent because of [+wh] of *what*, this CP is not qualified for phase, and the Spell-Out is postponed. Then, the derivation proceed to the matrix clause. Since the matrix [+Q] is for a question, this agrees with [+wh] of *what* (and of *who* in the case of (2)). At this time, the embedded CP becomes convergent and can be phase. In both (1) and (2), the embedded [Spec,CP] is already filled by a relative wh-phrase, so the embedded phase (CP) is spelled out. In (1), since the matrix EPP does not have any attractee (wh-phrase), the EPP is not checked and deleted. Consequently, the derivation crushes. Meanwhile, in (2), the matrix EPP can attract *who*, and every derivation becomes convergent. The present system can deal successfully with these contrasts. Moreover, the effect of wh-island can be also derived:

- (4) *What did John wondered where Mary bought __?
- (5) Who wondered where Mary bought what?
- (6) [C Mary bought what where] → [where C [Mary bought what where]]

The embedded [+Q] agrees with [+wh] of *what* and of *where*, and *where* is attracted by the embedded EPP to [Spec,CP] as in (6). At this point, the embedded CP can be convergent and can be phase. Therefore, this CP is spelled out and this domain becomes inactive in the derivation. And then, the derivation proceeds to the matrix clause. In (4), the matrix [+Q] does not have any partner of Agree, so the derivation crushes. On the other hand, in (5), the matrix [+Q] can agree with *who* and attract it. Therefore, the derivation becomes convergent.

The proposed system can successfully derive island effects as mentioned. The proposed system can also explain island effects in a wh-in-situ language like Japanese by means of assuming a parameter, which is “the EPP alternates with Q-morphemes”. If this system is on the right track, the phase can have more syntactic status. In addition, the assumption that phase is only CP is supported by du Plessis (1977), McDaniel (1986), McClosky (2000, 2002), where it is shown that the footprints of wh-movement are visible in some languages and wh-phrases seem to be landing only at [Spec,CP]. Moreover, we do not need assume covert movement for licensing of wh-in-situ under the proposed system, contra Chomsky’s system. That is, extra movement can be eliminated. If we do not need to assume it, the theory becomes more economical and elegant in terms of the conceptual side. Also we can remove some empirical problems of covert movement proposed in Aoun and Li (1993), Cole and Hermon (1994), Ouhalla (1996), Simpson (2000). Therefore, it can be concluded that the proposed system is motivated by both empirical and conceptual sides and that it can be a potential alternative to the system in Chomsky (2000, 2001a,b).

Selected References

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