Late Merge and Phase Theory
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The mechanism of late merge of adjuncts proposed by Lebeaux (1988) has been motivated by an argument-adjunct asymmetry regarding Condition C reconstruction, as illustrated below:

(1) a. *Which claim that John$_1$ was asleep was he$_1$ willing to discuss?

   b.   Which claim that John$_1$ made was he$_1$ willing to discuss?

When the antecedent of a pronoun is included in a relative clause, as in (1b), it seems as if no reconstruction of the fronted *wh*-phrase takes place, so that *John* in (1b) does not induce a Condition C violation. On the other hand, when the antecedent of a pronoun is included in the complement clause of a nominal head, as in (1a), the fronted *wh*-phrase behaves as if it is reconstructed into its original position, thereby inducing a Condition C violation. According to Lebeaux's (1988) mechanism of late merge, an adjunct can be introduced into a structure counter-cyclically due to the fact that it has no direct relevance for θ-relations and hence can be adjoined to a phrase it modifies after the latter undergoes A'-movement. This circumvents a Condition C violation in a case like (1b). In this paper, I argue that the mechanism of late merge of adjuncts is regulated by phase theory. In particular, I propose that an adjunct can be merged counter-cyclically but no later than completion of a given phase. The data set that motivates this mechanism comes from a surprising argument-adjunct asymmetry regarding Condition C effects that is observed at the right edge of a sentence. Reinhart (1976) observes the following contrast:

(2)   a. *Zelda sent him$_1$ back all Dr. Levin$_1$'s flowers.

    b. Zelda sent him$_1$ back all the flowers which Dr. Levin$_1$ had bought for her. (Reinhart 1976:161)

The impossibility of *him* referring to *Dr. Levin* in (2a) indicates that *him* c-commands *Dr. Levin*, hence inducing a Condition C violation. This account, however, makes us wonder why *him* can refer to *Dr. Levin* in (2b). An obvious difference between these two cases is the fact that only in the latter is the R-expression *Dr. Levin* embedded in a relative clause. Capitalizing on this difference, I propose that *Dr. Levin* in (2b) can evade a Condition C violation thanks to the possibility that the relative clause that includes it can be merged with its head counter-cyclically after the pronoun *him* is introduced into the structure in the relevant *v*P phase. I assume, following Epstein (1999), that the notion of c-command is defined in derivational terms in the following way:

(3)   α c-commands β only if β is a term of γ at the stage where α is merged with γ,

    where a term of γ is γ itself or any syntactic object dominated by γ.

Under the present proposal, the relative clause in (2b) can be merged with its head when the derivation proceeds up to the following point:

(4)   [$_{vP}$ Zelda [$_{VP}$ send him back all the flowers]

With this derivation, *him* does not c-command *Dr. Levin* according to (3), since the latter phrase is absent when the pronoun is introduced into the VP structure, hence free from a Condition C violation. Under the proposal that an adjunct must be merged no later than completion of a given phase, it is predicted that if a pronoun referring to an R-expression is located in a phase higher than an adjunct that includes the R-expression, then late merge of the adjunct does not help the R-expression evade a Condition C violation. This prediction is borne out by the following example:

(5) *He$_1$ sent Zelda back all the flowers which she had bought for Dr. Levin$_1$.

Here, the relative clause that includes *Dr. Levin* must be merged with its head no later than completion of the *v*P phase. Thus, when *he* is merged with T', it c-commands *Dr. Levin* since the latter phrase is included in T', hence inducing a Condition C violation. This mechanism of late merge of adjuncts in terms of phases is further supported by the Japanese data set that shows an argument-adjunct asymmetry with respect to the availability of argument ellipsis:

(6)   (6)   Taroo-wa zibun-no sensei-ni   [Hanako-ga   [*e*]   sono zizitu-o tutaeta toiu]
    Taroo-TOP self-GEN teacher-DAT Hanako-NOM   that fact-ACC told   Comp
    uwasa-o   tutaeta.   (*sloppy reading)
    rumor-ACC   told   'Lit. Taroo$_1$ told self$_1$'s teacher the rumor that Hanako told [*e*] that fact.'

(7) Taroo-wa zibun-no inu-ni [Hanako-ga [*e*] tuketeage-nakat-ta] kubiwa-o
    Taroo-TOP self-GEN dog-DAT Hanako-NOM put-not-Past collar-ACC
    tuketeageta. (^OKsloppy reading)
    put 'Lit. Taroo₁ put on self₁'s dog a collar that Hanako didn't put [*e*].' (cf. Sakamoto 2016)

The availability of a sloppy reading to a null argument has been claimed to be a hallmark of the availability of argument ellipsis (cf. Oku 1998), as shown below:

(8) John-wa zibun-no musume-o kiratteiru ga, Bill-wa [*e*] suiteiru. (^OKsloppy reading)
    John-TOP self-GEN daughter-ACC hate but Bill-TOP like
    'Lit. John₁ hates self₁'s daughter but Bill likes [*e*].'

In this sentence, the null object in the second clause can be interpreted not only strictly as referring to John's daughter but also sloppily as referring to Bill's daughter. The availability of both readings to this null object indicates that it is analyzed as involving argument ellipsis. Abe (2009) observes that argument ellipsis is unavailable when a null argument is c-commanded by its antecedent, as shown below:

(9) John-wa zibun-no musume-ni sensei-ga [*e*] ai-tagatteiru to itta. (*sloppy reading)
    John-TOP self-GEN daughter-DAT teacher-NOM want-to-see Comp said
    'Lit. John₁ told self₁'s daughter that the teacher wanted to see [*e*].' (Abe 2009:151)

This sentence does not have the reading that would be derived by copying *zibun-no musume* 'self's daughter' onto the null object, so that 'self's daughter' may be interpreted sloppily as 'the teacher's daughter'. This fact is derived from the anti-c-command requirement on argument ellipsis, since in (9), the null object is c-commanded by its antecedent, unlike that in (8). Given this, the unavailability of a sloppy reading to (6) immediately follows since the null object is c-commanded by its antecedent *zibun-no sensei-ni* 'self's teacher-DAT', hence not analyzed as involving argument ellipsis. Again, this leaves us the question why the null object in (7) can be interpreted sloppily as Hanako's dog despite the fact that it is apparently c-commanded by its antecedent. This question is immediately answered under the present mechanism of late merge of adjuncts and the derivational definition of c-command: the relative clause that includes the null object is counter-cyclically merged with its head *kubiwa-o* 'collar-ACC' after the indirect object antecedent *zibun-no inu-ni* 'self's dog-DAT' is introduced into the VP structure, and hence the null object is not c-commanded by its antecedent according to (3). It is then predicted that if the antecedent of a null argument is located in a phase higher than an adjunct that includes the null argument, then late merge of the adjunct does not help the null argument not to be c-commanded by its antecedent, thereby giving rise to a sloppy reading. This prediction is borne out by the following example:

(9) Taroo-wa [zibun-no musume-ga [Ziroo-ga [[*e*] kawa-nakat-ta to]
    Taroo-TOP self-GEN daughter-NOM Ziroo-NOM buy-not-Past Comp
    omotta] yubiwa-o katta to] omotteiru.
    thought ring-ACC bought Comp think
    'Lit. Taroo₁ thinks that self₁'s daughter bought the ring that Ziroo thought that [*e*] didn't buy.'

The null subject in this sentence cannot be interpreted sloppily as referring to Ziroo's daughter. Here, the relative clause that includes the null subject must be merged with its head no later than completion of the embedded *v*P phase. Thus, when its antecedent *zibun-no musume-ga* 'self's daughter-NOM' is merged with the embedded T', it c-commands the null subject since the latter phrase is included in this T', and hence the null subject cannot be analyzed as involving argument ellipsis. These discussions clearly indicate that phases play a significant role in regulating the timing of late merge of adjuncts.

Selected References Abe, J. 2009. Identification of null arguments in Japanese. *The dynamics of the language faculty*, ed. by H. Hoshi, 135-162. Tokyo: Kuroshio Publishers. Epstein, S.D. 1999. Un-principled syntax. *Working minimalism*, ed. by S.D. Epstein & N. Hornstein, 317-345. Cambridge, MA: MIT Press. Lebeaux, D. 1988. *Language acquisition and the form of grammar*. Ph.D. Thesis, UMass. Reinhart, T. 1976. *The syntactic domain of anaphora*. Ph.D. Thesis, MIT.