Cross-linguistic differences in NP-ellipsis within PPs: English, Chinese, and Japanese
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Synopsis: This paper provides a novel observation concerning cross-linguistic differences regarding NP-ellipsis (NPE) within PPs among English, Chinese, and Japanese, and considers their theoretical implications. Specifically, I point out that although NPE is equally allowed in nominals in the three languages, the parallel pattern breaks down when the nominals are selected by pre-/postpositions (Ps). I propose a principled account of these differences on the basis of the layered PP structure, the syntactic reflection of (non-)fusional Case morphology, and the phase based analysis of ellipsis.

Background: It is well known that NP-ellipsis is possible in English, Chinese, and Japanese.

1. [dp Mary’s attitude] is more impressive than [dp John’s [np ti attitude]]. (English)
2. [dp Zhangsan de che] bi [dp Lisi de [np li che]] geng gui (Chinese)
   ‘Zhangsan’s car is more expensive than Lisi’s’
3. [dp Taroo-no taido]-wa yoi ga, [dp Hanako-no [np ti taido]-wa yoku nai (Japanese)
   -GEN attitude-TOP good though -GEN attitude-TOP good not
   ‘Though Taroo’s attitude is good, Hanako’s isn’t.’

Saito et al. (2008) proposes a unified analysis of NP-ellipsis in these languages: D⁰ licenses ellipsis of its NP complement only when the genitive element fills the DP Spec.

Observation: NPE within PPs is always allowed in English ((4)) while it is disallowed in Chinese ((5)).

4. a. John learned a lot [pp from Mary’s attitude], and Bill learned a lot [pp from Jenny’s attitude].
   b. John played a guitar [pp on Mary’s birthday], and Bill sang a song on [pp Jenny’s birthday].
   from de top learn a lot whereas from de attitude learn a lot
   ‘John learned a lot from Bob’s attitude, while Ling learned a lot from Mary’s.’

In Japanese, some PPs allow but some other PPs disallow NP-ellipsis ((6)).

   Taro-TOP son-GEN birthday from quit.smoking-ACC begin
   Ken-wa [pp musume-no tanzyoobi kara] kiNen-o haise-ACC
   Ken-TOP son-GEN birthday from quit.smoking-ACC begin-PST
   ‘T started giving up smoking on his son’s birthday, and K started giving up smoking on his daughter’s.’
   b.*Taroo-wa [pp musuko-no tanzyoobi ni] kootuziko-o okosi,
   -TOP son-GEN birthday on traffic.accident-ACC cause
   Ken-wa [pp musume-no tanzyoobi ni] kootuziko-o okosi-ta
   -TOP son-GEN birthday on quit.smoking-ACC cause-PST
   ‘T caused a traffic accident on his son’s birthday, and K caused a traffic accident on his daughter’s.’

NPE is possible when the noun is contained in the PP headed by kara ‘from’ ((6a)) while it is impossible when the noun is contained in the PP headed by ni ‘on’ ((6b)). The discrepancy among the three languages appears to be puzzling for the unified analysis of NPE proposed by Saito et al. (2008), which does not refer to the syntactic environment of the nominals that are elided.

Analysis: The above observations receive a principled account by an interaction of the layered PP structure, the syntactic reflection of (non-)fusional Case morphology, and the phase based analysis of ellipsis. First, I assume (i) that the K(ase) must select D in languages with fusional Case morphology, like English, while K does not have to select D in languages with non-fusional Case morphology, like Japanese and Chinese. (cf. Hale and Marantz 1993, Otaki 2012).

7. a. KP-DP >> VP (fusional Case morphology: English)
   b. KP >> DP >> NP (non-fusional Case morphology: Japanese, Chinese)

Second, I assume (ii) that a single PP consists of (at least) tri-layered internal structure: PathP, PlaceP, and Ax(ial)PartP, as shown below (van Riemsdijk 1990, Svenonius 2004, 2006, Ayano 2001, amo.)

8. [pathP from/until/toward/O [placeP init/on/O [axialP front/back/top/down/O [dp ...]]]])

Finally, I assume (iii) that PPs form extended projections with the nominal system (Grimshaw 2000).

Based on these assumptions, I propose the following structure for English and Japanese PPs:

9. English: [pathP Ppath [placeP PlaceP [axialP AxialP [kp K [dp D [np ...]]]]]]

Of importance here is that in Japanese PPs are sandwiched by K and D, which is made possible by (i) and (iii). This is blocked in English because K must always select DP. For the analysis of NPE, I assume that (iv) ellipsis-feature on a functional head licenses ellipsis of its complement (Merchant 2001), and that (v) K is a phase head (M.Takahashi 2011) and E-feature on K is inherited to the head of its complement, just like C-T relation in the extended verbal nominal projection (cf. Chomsky 2008).

Based on the assumptions so far, NPE within English PPs ((4)) can be analyzed as follows:
Given (v), E-features on K are inherited to D, so that the EPP feature on D triggers movement of the genitive element to the Spec, DP. As a result, the complement of D can be elided in accordance with (iv), as shown in (11). Therefore, in English NP-ellipsis always takes place within DP whether or not the DP is embedded under PPs. On the other hand, NPE within Japanese PPs ((6)) is analyzed as follows:

In Japanese, E-feature of K is inherited by Path P (i.e. kara ‘from’) because K selects PathP in languages with non-fusional Case morphology, so that only the complement of Path P (i.e. PlaceP) is elided in accordance with (iv), as shown in (12). The analysis can capture the fact that unlike Path Ps (e.g. kara ‘from’, made ‘up to’), Place Ps (e.g. ni ‘on/in’, de ‘at’) cannot survive NPE in Japanese. As for the case of Chinese, I assume with Huang (2010) that DPs located in Chinese PPs undergo movement to satisfy the Case requirement. Considering Chinese circumpositions as in (13a), Huang (2010) proposes that Chinese PPs are head-initial and that the apparent head-final structure in the circumpositional construction in (13a) is derived by movement, as shown in (13b).

(13) a. [pp zai [shafa shang]]
   at sofa on
   
   b. [pp zai [ni shang shafa]]

Assuming the language-specific movement within PPs, NPE in Chinese PPs can be analyzed as follows:

Since Chinese is a language with non-fusional Case morphology, E-feature of K is inherited by Path P, just like in Japanese, so that the complement of Path P is elided in accordance with (iv). However, unlike Japanese, as the DP [Mary de taidu] has already undergone movement within AxPartP, subextraction of Mary de to satisfy the EPP on D is not allowed by the Freezing Principle (cf. Takahashi 1994, Stepanov 2007). As a result, the genitive element cannot survive NPE within PPs. This is why NPE within PPs is exclusively disallowed in Chinese. Note that the current analysis correctly predicts the availability of NPE in English ((1)), Chinese ((2)), and Japanese ((3)) because KPs have the identical structure in the three languages when host nominals are not located within PPs:

(14) Chinese: *[*[K K [Pathp cong/O [Pathp zai/O [AxPart [de Mary de taidu]. AxPart -]] [[EPP][E]]] ]]]

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When nominals are not located within PPs, the E-feature of K is inherited to D and the NP complement is elided in accordance with (iv). **Supportive evidence:** The current analysis predicts that in Japanese, NPE should be allowed when nominals are marked by dative Case –ni, contrary to the case of the postposition –ni in (6b) (cf. Miyagawa 1987). This is actually borne out, as shown below.

Although Taro was surprised at Hanako’s attitude, Ken was surprised at Maki’s attitude.

In (15), as the dative Case –ni is a head of KP rather than PathP, NPE in the second conjunct is allowed under the same configuration as in (14).