Partitives and the Particle *of* (Presented in Japanese)

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1.Introduction

There are some issues discussed for partitives like (1). Among them, the role of the particle *of* still seems unsettled in the literature: it may be the source of partitivity, or otherwise it is meaningless. This issue needs to be addressed with reference to the syntactic structure and (or) semantic function.

(1) John talked with {each of the visitors/ three of those students/ some of them}.

The structure in (2a), originally proposed by Lobeck (1991), can also be viewed as a 'single noun' approach, where the numeral (determiner) directly takes a PP as its restrictor. The approach based on (2b), on the other hand, shows heavier layers where an invisible noun intervenes between numeral and PP.

(2) a. **[$_{DP}$ D [$_{PP}$ of [$_{DP}$ NP]** : (Lobeck 1991, Matthewson 2001, Shin 2016, Gagnon 2013)

b. **[$_{DP}$ D [$_{NP}$ N [$_{PP}$ of [$_{DP}$ NP]]]]**: (Sauerland and Yatsushiro 2004, Cardinaletti 2006, Barker 1998, Ionin et al. 2006)

The argument we will develop here proceeds along the line with the null NP analysis in (2b), and assuming heavier layers will obtain favorable results, one of which comes from the (im)possibility of extraposition.

2.Constraints on Partitives

There has been intensive debate on several constraints relevant to partitives. Among them, this paper is particularly concerned over the following three constraints:

(3) a. Partitive Constraint (PC) b. Proper Partitivity c. Non-Definiteness of the Partitive Nominal

PC in (3a) requites that the preposition *of* take a definite argument of type *e* as its first argument as shown in (1). Proper Partitivity in (3b), extensively discussed in the literature, requires the outer nominal to be a 'proper' subpart of the referent of the inner nominal. This constraint shows that *of* should not merely combine the two nominals, but warrant that all the elements in the domain of the denotation of the outer nominal should be a (proper) part of the denotation of the inner nominal. The third constraint (3c), next, can be seen in the degraded status in (4a), which is distinguished from (4b) in that the upper nominal in (4a) cannot be directly linked to its explicit antecedent in the previous context.

(4) Five actors have arrived to the hotel, but two left immediately. (Falco and Zamparelli 2019)

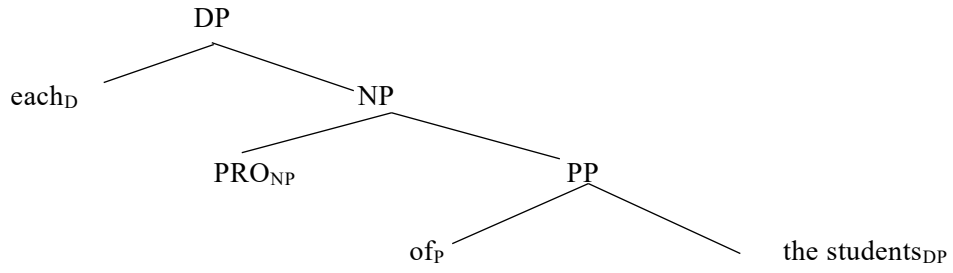
a. ??The two of the actors didn't like the hotel.

b. The two didn't like the hotel.

These constraints will be a natural consequence if our argument proceeds with the conventional view of the preposition *of* below in (5) and the matching analysis proposed by Falco and Zamparelli (2019) (henceforth F&Z), which is structurally represented in (6), where the status of the outer nominal is a PRO nominal, which is coindexed with (controlled cataphorically by) the lower nominal.

(5) $[\![of]\!] = \lambda x.\lambda P \lambda y[P(y) \wedge y<x]$

(6)



Proposal

In the matching theory, PRO will inherit a set of grammatical features from the inner NP by coindexing. Syntactically, some nominal portions within the inner DP are inherited to PRO, but what matters is which nominal portions, or which grammatical features contribute to PRO. I assume, following Zamparelli (1995), that English bare nouns start out with the denotation of kind predicates. I will map out the basic nominal structures as in (7), where nominals are embodied with multiple extended projections.

(7) [$_{DP}$ D [$_{NumP}$ Num [$_{PlP}$ Pl [$_{nP}$ *n* [$_{NP}$ N]]]]]

Along the lines taken by Zamparelli (1995), Carlson (2003), and Gehrke (2015), I assume that NP is a domain of a 'context-free' interpretive mechanism specifying a nominal-type, i.e., a predicate of nominal kinds. I propose that the head of the extended projection *n*P should be associated with Carlson's (1977) Realization, which relates a kind nominal variable to an object variable. Put differently, it yields a token interpretation from a type-denoting nominal. In fact, this function has been associated with #P in Zamparelli (1995), but in the argument here it is introduced in an earlier syntactic stage, *n*P. Next, PlP, associated with plural morphology, corresponds to Link's (1983) *operator, which delivers the number-neutral inclusive interpretation. Further, #P is projected on the PlP, and its head is specified for plurality/ singularity. When it is specified with [+Plu(ral)], then it filters out atomic individuals, as shown in (8d).

(8) a. $[\![[_{NP}\ \text{dog}]]\!] = \lambda x^k.\text{dog}(x^k)$ $<e^k,t>$ (Zamparelli 1995, Carlson 2003, and Gehrke 2015)

b. $[\![[_{nP}\ n\ [_{NP}\ \text{dog}]]]\!] = \lambda x\, \exists\, x^k\, [R(x, x^k) \wedge \text{dog}(x^k)] = \{a, b. c. d\}$ Cf. Carlson 1977

c. $[\![[_{PlP}\ \text{-s}\ [_{nP}\ n\ [_{NP}\ \text{dog}]]]]\!] = \lambda x.\, \exists\, x^k\, [*R(x, x^k) \wedge\ \text{dog}(x^k)] = \{a, b, c, a+b, a+c, b+c, a+b+c\}$

d. $[\![[_{\#P}\ \#_{[+Plu]}\ [_{PlP}\ Pl\ [_{nP}\ \text{-s}\ [NP\ \text{dog}]]]]]\!] = \{a+b, a+c, b+c, a+b+c\}$

With the nominal derivations assumed, let us consider how our mechanisms are implemented for some partitives. The partitive with the plural quantifier *some*, for example, is derived as follows:

(9) some of the dogs

a. $[\![\text{of}]\!] = \lambda x \lambda P \lambda y[P(y) \wedge\ y<x]$

b. $[\![[_{PP}\ \text{of}\ [_{DP}\ \text{the}\ [_{\#P}\ \#_{[+Plu]}\ [_{PlP}\ \text{-s}\ [_{nP}\ n\ [_{NP}\ \text{dog}]]]]\!] = \lambda P \lambda y[P(y) \wedge y <\ [\![\text{the dogs}]\!]\ ]$

c. $[\![\text{PRO}_{\#P}]\!] = \{a+b, a+c, b+c, a+b+c\}$

d. $[\![[_{PP}\ \text{PRO}_{\#P}\ \text{of}\ [_{DP}\ \text{the}\ [_{\#P}\ \#_{[+Plu]}\ [_{PlP}\ \text{-s}\ [_{nP}\ n\ [_{NP}\ \text{dog}]]]\!] = \lambda y[\text{PRO}_{\#P}\ (y) \wedge y <\ [\![\text{the dogs}]\!]\ ]$
$= \{a+b, a+c, b+c\}$

e. $[\![[_{DP}\ \text{some}\ [_{NP}\ \text{PRO}_{\#P}\ [_{PP}\ \text{of}\ [_{DP}\ \text{the}\ [_{\#P}\ \#_{[+Plu]}\ [_{PlP}\ \text{-s}\ [_{nP}\ n\ [_{NP}\ \text{dog}]]]\!]$
$= \lambda Q\, \exists\, y[\text{dogs}(y) \wedge\ y <\ [\![\text{the dogs}]\!]\ \wedge\ Q(y)]$

When plural determiners like *some* appears as the outer determiner, PRO is controlled cataphorically by #P. Note that the quantificational domain for the plural determiner *some* is well created by subtracting the denotation of the DP from the denotation of $\text{PRO}_{\#P}$:i.e., a set of plural sums minus the maximal individual. On on the other hand, a singular determiner like *each* requites PRO to be coindexed with *n*P cataphorically.

Due to space limitation, I cannot move on to some other partitives, but the argument developed here is also motivated by some historical facts: The historical disappearance of some 'quasi' pronouns (determiners without nouns) and their disappearance in partitives historically occur almost simultaneously, whose fact can be given a proper explanation with the analysis developed here. Furthermore, the approach combining the matching analysis with the nominal structure (7) will be extended to 'kind' partitives like *this kind of dog*/ *a kind of dog* (cf. *#the kind of dog*).

References

Barker, C. (1998) "Partitives Double Genitives and Anti-uniqueness," *NLLT* 16. **Cardinaletti, A. and Giusti, G**. (2006) "The syntax of Quantified Phrases and Quantitative Clitics," *The Blackwell Comparison to syntax*, Vo 5, Blackwell, Oxford. **Carlson, G**. (1977) "Reference to Kinds in English," Doctoral dissertation, University of Massachusetts Amherst. **Carlson, G**. (2003) "Weak Indefinites," *NP to DP*, John Benjamins, Amsterdam. **Falcon, M. and R.Zamparelli** (2019) "Partitives and Partitivity," *Glossa* 4(1). **Gagnon, M**. (2013) "Part and Parcel of Eliding Partitives," *SALT* 23. **Gehrke, B**. (2015) "Adjectival Participles, Event Kind Modification and Pseudo-incorporation," *NLLT* 33. **Ionin, T., O. Matushansky, and E. Ruys** (2006) "Parts of Speech: Toward a Unified Semantics for Partitives," *NELS* 36. **Lobeck, A**. (1991) "Phrase Structure of Ellipsis in English: Perspectives on Phrase Structure," *Vol 25 of Syntax and Semantics*, Academic Press, London. **Matthewson, L**. (2001) "Quantification and the Name of Crosslinguistic Variation," *NLS* 9. **Shin, K.** (2016) "Quantifiers in English Partitives," *NLLT* 34. **Zamparelli, R**. (1995) "Layers in the Determiner Phrase," Doctoral dissertation, University of Rochester.