The Semantic Basis of Syntax: The Case of Quantifier Float in Japanese

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QUANTIFIER FLOAT (QF, hereafter) is one of the most intensely investigated topics in Japanese syntax (e.g. Shibatani 1977, Kuroda 1983). In (1)a, the quantifier (Q, hereafter) is a nominal modifier marked by the genitive *no*. In (1)b, the Q "floats" off of the head NP and appears post-nominally. This floating is constrained, as indicated by the unacceptability of (1)c. Miyagawa (1989) claims that the phenomenon is subjected to the MUTUAL C-COMMAND REQUIREMENT, forcing the head NP and the Q to c-command each other. Thus the sentence is ungrammatical because the Q inside the VP cannot c-command the head NP in the subject position. Furthermore, QF is claimed to be a textbook example of a proof of the presence of a movement rule in Japanese (cf. Tsujimura 2014). The grammaticality of (1)d is ascribed to the scrambled direct object NP, whose trace, if not the NP itself, can be c-commanded by the Q.

(1)a. ***San-nin-no   gakusei-ga** hon-o   katta.*   → 'Three students bought books.'
   three-person-of student-NOM book-ACC bought

   b. ***Gakusei-ga san-nin**   hon-o   katta.*   → 'Three students bought books.'
   student-NOM three-person book-ACC bought

   c. ****Gakusei-ga** [*hon-o   **san-nin**   katta*]$_{VP}$.   → 'Three of the students bought books.'
   student-NOM book-ACC three-person bought

   d. ***Hon-o**$_i$ *gakusei-ga* [t$_i$ **san-satsu**   *katta*]$_{VP}$. → 'Three copies of the books, students
   book-ACC student-NOM   three-volume bought   bought.'

In Cognitive Grammar (CG, hereafter), such syntactic constructs as c-command and NP movement of course do not exist, excluded by the stringent CONTENT REQUIREMENT, which prohibits any semantically-void element in grammar. Therefore, QF could serve as a strong case against such a semantic approach to grammar; in this paper, however, I aim to demonstrate that a semantic analysis of QF is viable notwithstanding and further that it is also preferable.

A key to such an alternative is the varied types of counterexamples that have been presented. The sentences in (2) are "structurally" identical to (1)c in all relevant respects, yet they are clearly acceptable (cf. Gunji and Hashida 1998, Mihara 1998, Takami 1998). Note that Miyagawa cannot accommodate these "exceptions" by relegating them to "pragmatics" because what is ruled out by syntax cannot be ruled in by pragmatics. The only possible course of inquiry would then be to explain the infelicity of (1)c, as well as the felicity of (2), not in syntax, but in semantics.

(2)a ?*Tsugi-kara tsugi-e-to   **gakusei-ga** hon-o   **san-nin**   katta.*
   next-from   next-to-with student-NOM book-ACC three-person bought
   'One after another, three students bought books.'

   b. ?*Kinoo   **gakusei-ga** Shichi-nin-no   Samurai-o   **san-nin**   mita.*
   yesterday student-NOM seven-person-of samurai-ACC three-person saw
   'Three students saw *The Seven Samurai* yesterday.'

   c. ?***Gakusei-ga** hon-o   **san-nin-mo**   katta.*
   student-NOM book-ACC three-person-as.many bought
   'As many as three of the students bought books.'

To this goal, I adopt the view that floated Qs function as adverbials (cf. Ishii 1999, Nakanishi 2007) and as such modify the meaning of the predicate, quantifying the head NP only indirectly. That is to say, in the semantic structure of a floated Q, the process expressed by the predicate is quantified and replicated, with the result of replicating the participants as well. Based on this view, I claim that the acceptability of a floated Q is determined by the replicability of the process involved, not that of the targeted participant itself and that varied types of factors are brought to bear in this assessment.

In the case of (1)c, the two participants are interpreted indefinitely, without any contextual support, which results in double replication of both the subject and the direct-object participant. This double replication is a cognitively-taxing task that results in unacceptability without any aid. In (2)a such aid is provided by the seriality of the evoked temporarily distinct processes, which invoke participant replication by themselves. In the case of (2)b and (2)c, only replication of one single participant is required, resulting in improved acceptability. In the former, the direct-object participant is a proper noun, which is not replicated, and in the latter, the presupposition necessarily evoked by the particle *mo* already encompasses the subject participant, obviating its replication.

In conclusion, it is argued that CG can explain the basic data on QF in (1) without relying on any uniquely syntactic notion and can accommodate the counterexamples in (2) without additional cost. Notice that the proposed analysis is made possible by bringing together a wide range of factors affecting the unifying semantic schema, which the syntacticians (e.g. Kuroda and Miyagawa), lexical semanticists (e.g. Mihara), formal semanticists (e.g. Nakanishi), and functionalists (e.g. Takami) all have failed to observe. Therefore, QF in Japanese allows us to recognize the advantage, actively promoted by CG, of observing a phenomenon without preconceptions and across all factors involved and of seeking for an underlying operation responsible in order to reach a revelatory analysis.