Non-floating collective numeral quantifiers in Japanese

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Introduction: A distributional restriction of Floating Numeral Quantifiers (FQ) as in (1) has provoked a huge controversy (e.g., Bobaljik 2003, Mihara 1998, Miyagawa 1989, 2012). I show that, when collective reading is available, numeral quantifiers may appear at a preverbal position, where FQs may not occupy as in (1b). I argue that collective numeral quantifiers in this location should be analyzed as a different type of modifier from FQs, that is, a manner adverbial that modifies a verb. I call this type of quantifiers Manner-adverbial Numeral Quantifiers (MQ). In the current paper, I demonstrate that MQs and FQs are syntactically and semantically different. I also discuss theoretical implications on analyses of FQs.

(1)a. *Gakusei-ga kinoo 3-nin hon-o katta. (2)*Gakusei-ga kinoo 3-nin Peter-o korosita.  
    student-NOM yesterday 3-CL-FQ -ACC bought  
    [‘Three students bought a book yesterday.’ (Intended) ‘Three students (individually) killed Peter yesterday.’]

Semantics: I demonstrate that differences between FQs and MQs can be observed in their semantic properties: distributivity/collectivity (Nakanishi 2008), specificity (Watanabe 2008), partitivity (Inoue 1978), and manners of quantification. For instance, FQs may not allow collective reading, as in (2), whose unacceptability stems from a conflict between the collectivity required by the predicate and the distributivity required by FQ; the distributivity requires that Peter was killed by each of the three students (i.e., in total three times). On the other hand, when the quantifier 3-nin is located at the preverbal position (i.e., as MQ), (2) becomes acceptable with a meaning such that the three students killed Peter together. Thus MQs lead collective reading.

Syntax: I argue that MQs are syntactically not the same as FQs with respect to base positions, distributions, and scramblablity. Whether or not it forms a constituency with an associated NP, FQ should be adjacent to the subject at certain stages of its derivation. (Miyagawa et al. 2007, Nakanishi 2008). Hence, FQ is not likely to be generated inside VP, but to be generated at or higher than vP level, at which the subject starts out, as in (3). On the other hand, through tests with VP-preposing and VP-ellipsis I provide evidence that MQs stay inside VP.

(3)Gakusei-ga (3-nin) kinoo \([v_p \text{ (3-nin)} t_{\text{NOM}} [v_p \text{ Peter-o (*3-nin) korosita }]]\)  (3-nin: FQ)

Even when FQ is based in VP as in the case of passives, MQ and FQ show different behaviors. Example (4a) illustrates that FQ does not appear at the base position in passives even though the surface subject starts out from the object position. If the FQ stayed at the object position in the VP, the adverb joyfully should be able to modify the main verb (5aii). When the quantifier 3-nin has collective reading (viz. as a MQ), however, it may stay inside the VP as in (5bii), where the adverb modifies the main verb.

(4) Gakusei-ga yorokonde 3-nin t_{\text{NOM}} ke-rare-ta.

a. (FQ) (i) ‘Joyfully, three students were kicked.’  
   (ii) *‘Three students were joyfully kicked.’

b. (MQ) (i) ‘Joyfully, students were kicked by a group of 3 persons.’ (= the students are joyful)  
   (ii) ‘Students were joyfully kicked by a group of 3 persons.’ (= the kickers are joyful)

Implication: I further provide suggestions about analyzing FQs. Many counterexamples have been introduced against distributions of FQs shown in (1) (e.g., Mihara 1998, Takami 2001). The analysis of MQs introduced thus far suggests, however, that quantifiers in the ‘counterexamples’ can be in fact merely different types of NQs, and that not all ‘floating’ quantifiers should be captured by a single derivation or structure. I show that some quantifiers used in the literature are not FQs but MQs, or possibly neither of them.
References