

*On the semantics of Japanese postpositional phrase “X-made”  
and its relation to quantificational expressions*

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Abstract

The aim of this paper is to present the semantics of Japanese postpositional phrase “X-made”, comparing it with that of quantification expressions. The present paper is devoted to *-made* ‘to/as far as’ as a so-called ‘ordering particle’ (Okutsu (1966)), which is exemplified in (1):

(1) John-ga hon-o 10 peeji-made yonda

John-NOM book-ACC 10 page-to read            ‘John read the book to page 10.’

The important characteristic of this type of *-made* phrase is that the event encoded by the main verb continues the point provided by the *-made* phrase. I argue that a *-made* phrase introduces a scale according to which an object is ordered and the event is related to this scale.

Based on the analysis proposed by Nakanishi(2003), I argue that this use of *-made* phrase is assimilated to the semantics of floating quantifiers in Japanese. Nakanishi(2003) argues that a floating quantifier in Japanese is analyzed as a monotonic measure function on event domain. Monotonicity of measure function requires (i) events must have a lattice structure (i.e. part-whole structure) in its extension, and (ii) if e1 is a proper subpart of e2, then measure function  $\mu$  must preserve the part-whole structure (i.e.  $\mu(e1) < \mu(e2)$ ). In fact, *-made* phrase shows the same restriction with respect to the monotonicity constraint:

(3) a. \*yuki-ga kinoo sono ie-o 3 ton ositubusita

snow-NOM yesterday that house-ACC 3 ton broke-by-pushing  
‘Three tons of snow crashed the house.’

b. yuki-ga kinoo sono ie-ni 3 ton tumotta            [FQ]

snow-NOM yesterday that house-on 3 ton accumulated  
‘3 tons of snow accumulated on the house.’

(4) a. \*yuki-ga kinoo sono ie-o nikai-no mado-no sita-made ositubusita

snow-NOM yesterday that house-ACC second floor-GEN window-GEN below-as far as crashed  
‘The snow that accumulated to the window on the second floor crashed the house.’

b. yuki-ga kinoo sono ie-ni nikai-no mado-no sita-made tumotta            [X-made]

snow-NOM yesterday that house-on second floor-GEN window-GEN below-as far as accumulated  
‘The snow accumulated on the house to the point of the window on the second floor.’

The proposed semantics of *-made* phrase is as follows:

(2)  $\text{made} = \lambda x \lambda P \lambda e [P(e) \ \& \ \text{made}(\mu(e))(x) \ \& \ \mu \text{ is monotonic on } P]$ , where x is of type d, P is of type  $\langle e, t \rangle$

Thus, I propose that *-made* phrase is analyzed on a par with floating quantifiers. I present other quantificational properties of *-made* phrase: (i) scope interaction with other quantificational expressions (ii) scope interaction with negation and (iii) distributive vs. collective interpretation.

In addition to the similarity with floating quantifiers, I point out one difference between them: *-made* phrase seems to function as a ‘strong’ or ‘partitive’ quantifier. Compare (5a) and (5b):

(5) a. ronbun-o 30 peeji yonda

paper-ACC 30 pages read

b. ronbun-o 30 peeji-made yonda

paper-ACC 30 pages-to read

In (5a), the length of the paper may or may not exceed 30 pages, but in (5b), it must be longer than 30 pages. The difference is exhibited also in the contrast between stage-level and individual-level predicates.