Double nominative and double accusative NPs in Japanese

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In two experiments, we consider some issues in the use of double nominative NPs and double accusative NPs to create unambiguous control sentences in Japanese sentence processing experiments.

EXPERIMENT I

Consider the Japanese sentences in (1) adapted from Mazuka and Itoh (1995).

(1) a. Obasan-ga yobo-yobo-no toshiyori-o gunzen-ni kousaten-de mita takushii-ni isoide noseta.
   woman-NOM feeble old-person-ACC by chance intersection-LOC saw taxi-DAT in a hurry put
   'The woman put the feeble old-person in a hurry in the taxi that she saw at the intersection by chance.'

   Sentence (1a) is locally ambiguous: at the verb "saw", it can be interpreted as a simple clause. However when the underlined word is read, a Japanese speaker has to reanalyse it as the head of a relative clause. Using (1b) as control, an experiment with self-paced reading moving window paradigm was run, however no significant differences were found. In a second version of the same experiment, the case marker of the first NP ("woman") was changed to topic ("-wa"). This time there was a significant difference was found (F(1,26) = 12.493, p = 0.002) in the residual reading times of the words in uppercase.

EXPERIMENT II.

Now consider the following sentences adapted from Yamashita (1994).

(2) a. Oisu-de jimina shoukuin-ga kakarichou-ni shibui koucha-o dashita josei-o teineini shoukai-shita.
   office-LOC plain employee-NOM manager-DAT sour tea-ACC served woman-ACC politely introduced
   'At the office a plain employee politely introduced the woman who served the sour tea to the manager.'

   The sentences in (2) differ only in the case markers of "manager" and "woman", which are crucial to determine whether the sentences are ambiguous or not.

   Subjects seem to initially interpret (2a) as a simple clause, and when the word "woman" is read, they realize that it is the head of a relative clause and have to reanalyze. Using (2b) as a control, we found that the word "woman" took longer to read in (2a) than in (2b), F(1,32) = 5.572, p = 0.025.

References
