

## **Maximality trouble?: Japanese-speaking children's interpretation of comparatives**

**Aim** This study investigates how Japanese-speaking children interpret predicative comparatives with the phrasal complement (1). We consider what linguistic component(s) of comparatives are (is) causing any difficulty children may have in interpreting the construction.

**Comparatives** Comparatives like 'A is taller than B' show a relationship between two individuals A and B with respect to their degrees along the dimensional property expressed by adjectives (i.e. 'height' here). We adopt the standard analysis, in which the comparative is a syntactic relation between two degrees, which have been calculated by the maximality operator (von Stechow 1984, Heim 2001).

**Previous Studies** The acquisition of comparatives has captivated many researchers (ownsend 1974, Hohaus et al. 2014, among others). But some results (e.g. Wales and Campbell 1970) show that some good child performance is attained by the child taking comparatives as adjectives without an analysis of the comparative. This study attempts to control for this type of problem by manipulating the conditions in which *X is Adj.* is true.

**Japanese comparatives** We assume that Japanese phrasal comparatives can be analyzed on a par with English phrasal comparatives and adopt the Direct/Individual Analysis of phrasal comparatives (Heim 1985, Kennedy 2007). Therefore, we assume that two degree descriptions are compared.

**The experiment** The experiment specifically examined whether the dimensional degree to which the 'associate' NP has a given property or the availability of extra items other than the 'associate' item and the 'standard' item affects children's interpretation of comparatives. A task was designed to control for apparent "correct" responses.

**Participants** This experiment used a TVJT with a group of 48 children (17 4-year-olds, 16 5-year-olds and 15 6-year-olds). A group of ten adults served as a control group.

**Stimulus sentences** were used in a two-by-two design (2), with four items for each sentence type. One variable was the sentence, either 'T' or 'F,' and the other variable manipulated the size of the item serving the 'associate' NP. (Non-comparative) adjectives were also tested.

**Results** The 4-year-olds' results showed that there were no significant differences between responses to the C1 vs. C3, C2 vs. C4, C1 vs. A1, and C2 vs. A2 items (see Figure 2), which was unlike the 5- and 6-year-olds. Such results show that 1) the 4-year-olds tend to disregard degrees to which standard NPs satisfy a given dimensional property and that 2) they interpret comparatives on a par with (non-comparative) adjectives. The analysis of the individual subject data also shows the same.

We suggest that the 4-year-olds' poor performance stems from the difficulty they have with the notion of *maximality* (as evidenced by results in the semantics of definite determiners and free relatives). Extending that explanation to comparatives, we propose that the semantics of comparatives cannot be adequately defined without the notion of maximality. We also consider the possibility that those children take comparatives as adjectives of type  $\langle e, t \rangle$ .

(1) Mary-ga Emily-yori takai (adj./comparative). ‘Mary is taller than Emily.’

(2) Comparative stimulus sentences and adjective items, with expected adult responses

Condition:	Low Degree	High degree'
C(omparatives): Is B adj.-er than C?	C1: ‘T’	C2: ‘T’
C(omparatives): Is B adj.-er than A?	C3: ‘F’	C4: ‘F’
A(djectives) : Is B adjective?	A1: ‘T’ < ‘F’	A2: ‘T’ > ‘F’



Figure 1. (3) The blue pencil is longer than the green pencil. (Low Degree)

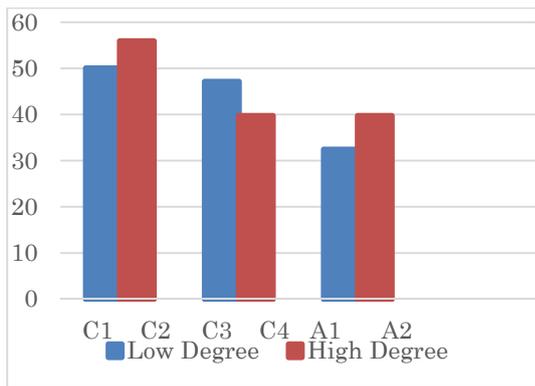


Figure 2. 4-year-olds' acceptance of test items (%)

**Selected references** Townsend, D. J. 1974. Children's comprehension of comparative forms. *Journal of Experimental Child Psychology* 18: 293-303. von Stechow, A. 1984. Comparing semantic theories of comparison. *Journal of semantics* 3: 1-77. Wales, R. and Campbell R. 1970. On the development of comparison and the comparison of development. In G. Flores D'Arcais and W. J. M. Levelt (eds), *Advances in Psycholinguistics*. Amsterdam: North-Holland.