Ora Matushansky (CNRS/Université Paris 8) and E. G. Ruys (UiL-OTS/Utrecht University)

BEST REGARDS

Puzzle: Plural superlatives (1) raise an unexpected problem for the semantics of the definite article: the definite description *the highest mountains* doesn't seem to necessarily denote the unique maximal entity corresponding to the description. In addition, Stateva (2005) argues that plural superlatives cannot be directly derived from the usually assumed semantics of the superlative (Heim (1999)) in (2) combined with standard assumptions on plurality (Scha (1981), Link (1987), Landman (1989a, b), Lasersohn (1989), Schwarzschild (1996), etc.).

Proposal: Both problems can be solved if certain assumptions are made on the interaction of pragmatics and semantics in comparing plural entities. We will first survey existing semantic analyses of plural comparison and propose an alternative. Then we will show how pragmatic conditions interact with the semantics of comparison and plurals to account for plural comparatives and superlatives.

Plural comparison: Scha and Stallard (1988) and following them Schwarzschild (1996:87) observe that (3) can be true if in each given area the frigate(s) in this area are faster than the carrier(s), regardless of speed relations obtaining between ships across different areas. Thus, while a comparison relation may obtain between pluralities, the question arises whether and how this relation can be reduced to relations between individuals making up these pluralities.

Scha and Stallard (1988) argue that the truth-value of a plural comparative can be derived from a conjunction of singular comparatives. In view of (3), the universal-universal conjunction (4a) is too strong and (4b) should be preferred. We challenge this view on two grounds: **(a)** (4b) is too weak, and **(b)** reduction to singularities is not always possible, in which case pragmatic considerations apply.

More complex comparison: (4b) predicts that (5) should be true in the situation (6), which is incorrect: in the absence of any context, (5) cannot be judged; a judicious choice of context (e.g. whether one has to fly over them east to west, or north to south) can render (5) true or false. Therefore comparing pluralities does not always reduce to comparing their proper parts.

Analysis: We replace (4) with the conditions in (7) and (8). This not merely derives that (9) is true in the situation (6) due to (7a), but also predicts its truth in the situation (10), where (7b) applies, and the fact that the relation between the rightmost mountains and the middle mountains in (6) is undetermined (which is why none of our conditions are biconditionals). Furthermore, when there exists a pragmatically salient division of pluralities into sub-pluralities, comparison happens at the level of these sub-pluralities, as stated in (8).

Plural superlatives: We argue that plural superlatives are interpreted as groups (rather than distributively, as in Stateva (2005)), hence no modification of the lexical entry (2) is required. We extend our analysis to these groups by noting that comparison between groups A and B involves comparison between the pluralities $\downarrow$A and $\downarrow$B corresponding to A and B. The interpretation of plural superlatives can then be derived from the proposed constraints on the plural comparative, as in (11). Like with plural comparatives, unless the conditions in (7) and (8) obtain, plural superlatives depend on the circumstances of evaluation.

Definiteness: If plural superlatives involve comparison between groups, the behavior of the definite article in (1) is no longer problematic: the uniqueness/maximality presupposition can be satisfied as in singular superlatives by the fact that the external argument of the superlative is a maximal contextually defined group.

Distributivity: Counter to Stateva (2005), the distributive reading of plural superlatives (12a) exists and involves a distributive operator at the level of the predicate. The comparison set C is defined for each singularity under consideration, along the lines of (12b).

Pragmatics: When none of our conditions apply, comparison between pluralities becomes impossible, and the groups are viewed as pragmatically complex singularities, whose height (or any other property) is context-dependent – a conclusion supported by cases like (13), where none of our conditions provides the correct truth-conditions.

(1) **Context**: The Himalayas have eight of the 14 highest mountains in the world.
   a. Mount Everest and K2 are the highest mountains.
   b. Mount Everest, K2 and Kānchenjunga are the highest mountains.

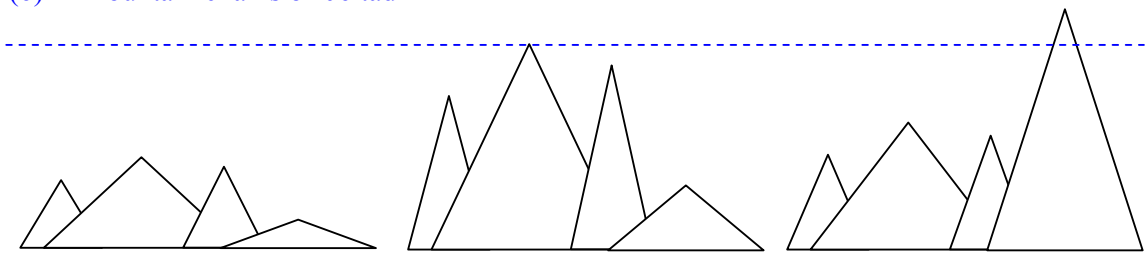
(2) $[\![\text{-}st]\!] = \lambda C_{\langle e,t\rangle} . \lambda R_{\langle d,\langle e,t\rangle\rangle} . \lambda x_{\langle e\rangle} . \forall z \in C : z \neq x . \max(\lambda d.R(d)(x)) > \max(\lambda d.R(d)(z))$
[-st]](C) (R) (x) is defined only if **x ∈ C** and **∀y ∈ C ∃ d : R (d) (y)**

(3) The frigates were faster than the carriers.

(4) a. A is R-er than B => ∀aΠA ∀bΠB [a is R-er than b] (where Π means *atomic part*)
   b. A is R-er than B => ∀aΠA ∃bΠB [a is R-er than b] ∧ ∀bΠB ∃aΠA [a is R-er than b]

(5) The rightmost mountains are higher than the middle mountains.

(6) Mountain chains on Jeltad



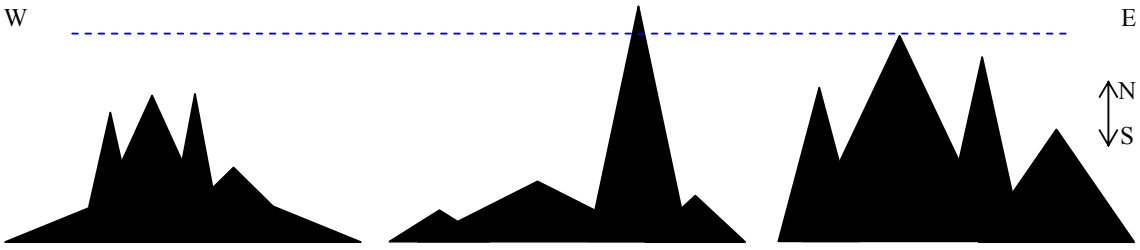
the Alphas the Betas the Gammas

(7) A is R-er than B if
   a. ∀aΠA ∀bΠB [a is R-er than b], *or*
   b. |A|=|B|=n ∧ there exists a one-to-one correspondence $\langle a_1, b_1\rangle \ldots \langle a_n, b_n\rangle$ such that $\forall\langle a_i, b_i\rangle$ [a_i is R-er than b_i], *or*
   c. (8)

(8) A is R-er than B if
   a. there exists a contextually determined partition of A into A_1, A_2 such that A_1 is R-er than B ∧ A_2 is R-er than B, *or*
   b. there exists a contextually determined partition of B into B_1, B_2 such that A is R-er than B_1 ∧ A is R-er than B_2

(9) The rightmost mountains are higher than the leftmost mountains.

(10) Mountain chains on Trantor



the Alephs the Beths the Gimels

(11) The group A is the R-st P if for all relevant groups B s.t. [↓B∈*P ∧ A≠B], ↓A is R-er than ↓B; with the presupposition that ↓A∈*P (cf. (2))

(12) a. Alice and Beth are the best students (in their classes).
   b. Alice and Beth went to (their respective) school.

(13) The Himalayas/these summits are the highest mountains (in the world).