Klein's approach in a degree-based approach

There are broadly two kinds of approaches to the semantics of positive and comparative adjectives, degree-based and degree-less ones. Degree-based approaches (e.g., Kennedy 2007) are currently preferred for a number of reasons, but degree-less approaches (e.g., Klein 1980, 1982) were influential earlier. Klein's approach in particular has received favorable attention more recently in Doetjes et al. 2011. In this paper, I propose a way of reconstructing Klein's treatment of positive and comparative adjectives (i.e., degree adjectives) in a degree-based theory.

Initially, there are three features of Klein's treatment of degree adjectives that stand out from the perspective of a degree-based approach:

(1) a. There are no degrees as primitive entities.
     b. The semantics of the positive form of a degree adjective is semantically simple (i.e., there is no need for a phonetically null morpheme *pos* to derive the desired meaning).
     c. The semantics of the positive form of a degree adjective allows for truth value gaps.

(1a) is an essential difference between a degree-less approach and a degree-based approach in that the latter cannot adopt this feature while remaining a degree-based approach. (1b) is also taken to be an essential difference and one that Klein takes to favor his approach given that *pos* generally doesn't appear to be morphologically manifested cross-linguistically. Finally, (1c), if not an essential difference, nevertheless seems to have been forgotten or neglected in degree-based approaches.

To recall, for Klein, an example such as (2a) is represented as in (2b), and the function interpreting tall, F_{tall}, is understood as in (2c).

(2) a. Steve is tall.
     b. tall(steve)
     c. F_{tall} is a partial function that if applied to an individual x, is 1, 0, or undefined, depending on whether x belongs to the positive extension of tall, its negative extension, or its extension gap.

Not appearing in (2c) is the idea that (2b) is evaluated relative to a context of use, which in this case means that the context determines a comparison class that is partitioned by F_{tall}. In sum, Steve is either definitely tall (true), or definitely not tall (false), or neither definitely tall nor definitely not tall (undefined). Observe that (2) exhibits the three features listed in (1).

Taking Kennedy 2007 as an instance of a degree-based approach, (2a) would be analyzed as in (3).

(3) Steve is tall (= (2a)) $\rightsquigarrow$ tall(steve) $\geq d_s$
     Where tall is a measure function from individuals to degrees and d_s is a contextually determined standard degree of comparison.

Note that the bare adjective *tall* contributes the measure function tall, whereas the phonetically null morpheme *pos* contributes the greater-than-or-equal-to comparison with d_s, which is why the semantics of a positive adjective in a degree-based approach is semantically complex.

A way of reconstructing Klein's analysis in a degree-based approach (though not specifically in Kennedy's) is to treat the positive form of an degree adjective as basic and as including an interval of degrees $[d_s, d_s']$ as a contextually determined standard of comparison, as illustrated in (4).

(4) a. Steve is tall (= (2a)) $\rightsquigarrow$ tall(steve, $[d_s, d_s']$)
     b. $F_{tall}([d_s, d_s'])$ is a partial function that if applied to an individual x, is 1, 0, or undefined, depending on whether x's degree of tallness (= x's height) is greater than or equal to d_s', less than d_s, or falls between d_s (inclusively) and d_s' (exclusively).

The analysis in (4) exhibits the features (1b) and (1c) of Klein's approach because it does not have *pos* and it allows for truth value gaps, which shows that a degree-based approach need not have *pos* and may allow for truth value gaps.

The next step is to show how degree modifiers such as *six feet* can be added to *tall*, how the comparative form *taller (than)* can be derived from the positive form, and how the truth value gaps are eliminated in each case. The general strategy is to abstract over the interval of degrees $[d_s, d_s']$ and to manipulate it.

References

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