

## A Neo-Kleinian Approach to Comparatives

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INTRODUCTION. Adjectives such as *tall* get a high degree meaning when used in isolation. Thus, *John is tall* does not simply mean that John has (a certain) height, but rather that he is taller than average. This led Cresswell (1976) to argue that gradable adjectives are relations between individuals and degrees and to postulate the operator *pos* which binds the degree variable of the adjective when used in the positive form. Given the fact that *pos* is invisible, its existence is based on circumstantial evidence. Not surprisingly, it has been claimed that *pos* does not exist: Klein (1980) argues that *pos* ‘is merely a device for fixing up the semantics’. In his framework, *pos* is not necessary as adjectives such as *tall* are interpreted as the property of being tall, where what counts as *tall* depends on the context. A major advantage of a Klein-style analysis is that gradability depends on orderings, and as such is predicted to be found outside of the adjectival system, a prediction which is born out (see Doetjes 2008). The distribution of degree modifiers such as *less* and *more* in English and for instance *hodně* ‘a lot’ in Czech or *trop* ‘too (much)’ in French, that combine with adjectives but also with nouns and verbs, is most easily understood if one assumes that gradability follows from the existence of an ordering, rather than from the presence of a degree variable. However, it has been shown that Klein’s theory cannot account for a number of phenomena (see, e.g. Kennedy 1999, 2001, Bale 2006, 2008). In this talk, we will argue in favor of a modified version of Klein’s theory, which allows us to maintain a non degree based interpretation for gradable adjectives. We will show that a number of important insights from both Kennedy and Bale can be accommodated in this modified version.

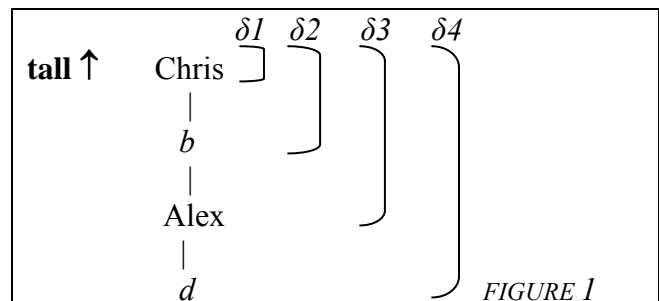
THE PROPOSAL. Klein’s original analysis of the comparative makes use of negation, as illustrated in (1) (Klein 1982: 127). Klein adopts the Consistency Postulate in (2).

- (1) a. Chris is taller than Alex is [<sub>AP</sub> e]  
 b.  $\exists d[(d(\text{tall}))(\text{Chris}) \wedge \neg(d(\text{tall}))(\text{Alex})]$
- (2) **Consistency Postulate (CP)**  
 $\forall x_0 \forall x_1 \forall Q[\exists d[(d(Q))(x_0) \wedge \neg d(Q)(x_1)] \rightarrow \forall d[(d(Q))(x_1) \rightarrow d(Q)(x_0)]$   
 (where *Q* is a predicate variable) (Klein 1982: 126)

As a consequence of the CP, degree functions must be ordered with respect to each other in such a way that they all include the highest ordered element(s) of the set defined by the adjective. We propose to make use of this ordering of degree functions, rather than of negation, as in the simplified representation in (3):

- (3)  $\exists \delta 1[(\delta 1(\text{tall}))(\text{Chris}) \ \& \ \delta 1 <_{\Delta} \delta 2]$   
 ( $\delta 2$  is the minimal degree function including Alex when applied to *tall*;  $<_{\Delta}$  expresses an ordering relation between  $\delta 1$  and  $\delta 2$  corresponding to ‘being less inclusive/more restrictive’)

As illustrated in figure 1, this accounts for the truth of the sentence in (1a): both  $\delta 1$  and  $\delta 2$  are more restrictive than the minimal degree function that, when applied to *tall*, includes Alex ( $\delta 3$ ). It is important to keep in mind that the most restricted degree function corresponds to the highest degree in a degree based approach; therefore the



ordering relation between the degree functions is reversed as compared to the ordering relation between degrees. As in most degree based approaches, the *than*-clause involves an operator variable structure, but in our analysis it defines a degree function rather than a degree. Note also that the ways in which we modify Klein's original account make our analysis more compositional, as we will demonstrate in detail in the paper.

HOW TO GET TO THE MINIMAL DEGREE FUNCTION. We assume that there are three ways of getting to the minimal degree function provided by the *than*-clause: **1)** a periphrasis of the kind “**the minimal  $\delta$  such that  $x$  is  $\delta(A)$ ” (1a); **2)** a degree function based on **a measure** (4a) and **3)** a degree function such as *slightly, quite, very* (4b).**

- (4) a. The table is longer than the desk is wide  
b. Ben is funnier than Steve is rich (cf. Bale 2006)

The **first** type is only applicable in comparatives with only one adjective, as in (1a): as the degree function is defined in terms of the ordering provided by the adjective in the matrix, it is incompatible with cases like (4), involving two different adjectives, and hence two different orderings. The **second** type is found in subdeletion structures with dimensional adjectives that are associated with the same measurement system as in (4a). Contrary to Klein, we assume that one degree function is fixed by the *than*-clause. This has an interesting consequence, as it will fix the orientation of the measure-based degree function: it will have an upward orientation for positive adjectives (“at least”-type interpretation) and downward orientation for negative ones (“at most”-type interpretation), as required by the CP. To see why, look again at figure 1. If we take this to be the set corresponding to *short*, the ordering of the individuals is reversed. What is more important, the degree functions are no longer in accordance with the CP, which requires them to be nested the other way around, all including *d* and only the largest one including *Chris*. As a result, a measure-based degree function introduced by a negative adjective will not be compatible with a positive adjective in the main clause and the other way around, much in the same way a positive degree is incompatible with a negative degree and vice versa in Kennedy's framework, thus accounting for cross polar anomalies (cf. Kennedy 1999, 2001). The **third** type involves degree functions such as *slightly, quite* and *very* and accounts for Bale's indirect comparison without making use of his Universal Scale. Just like the measure-based functions, these functions are compatible with different adjectives, and as such they can be used to apply in comparatives such as (4b). Contrary to what one finds for measures, these degree functions always pick the highest ordered elements in an ordering (i.e. orientation changes depending on the polarity of the adjective) and as such no cross polar anomalies are expected here, which is in accordance with the data. Some more complicated cases introduced by Bale, as well as the relation between indirect comparison and comparison of deviation will be discussed during the talk.

REFERENCES: **Bale, A. (2006)**. *The Universal Scale and The Semantics of Comparison*. Diss., McGill University. **Bale, A. (2008)**. A universal scale of comparison. *L&P* 31(1): 1-55. **Cresswell, M.J. (1976)**. The semantics of degree. In Partee, B. (ed.), *Montague grammar*. Academic Press, New York. 261-292. **Doetjes, J. (2008)**. Adjectives and degree modification. In McNally, L. & C. Kennedy (eds.) *Adjectives and Adverbs: Syntax, Semantics and Discourse*. Oxford University Press, 123-155. **Kennedy, C. (1999)**. *Projecting the adjective. The syntax and semantics of gradability and comparison*. Garland, New York & London. **Kennedy, C. (2001)**. Polar opposition and the ontology of ‘degrees’. *L&P* 24: 33-70. **Klein, E. (1980)**. A semantics for positive and comparative deletion. *L&P* 4(1):1-46. **Klein, E. (1982)**. The interpretation of adjectival comparatives. *Journal of Linguistics*, 18:113-136. **von Stechow, A. (1984)**. Comparing semantic theories of comparison. *Journal of Semantics*, 3: 1-77.