

Comparatives combined with additive particles

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It is a well-established finding in the semantics of gradable adjectives that comparative forms do not relate to a standard of comparison given by the context. While the positive in (1a) may be true or false depending on the comparison class (e.g., eight year old girls) and the standard of comparison (e.g. their average height), the comparative in (1b) is assessed by simply comparing the height of Marie and Anna. Accordingly, (1b) neither entails that Anna is tall nor that Marie is.

- (1) a. Marie ist groß. 'Marie is tall.'
b. Marie ist größer als Anna. $\neq \Rightarrow$ Anna ist groß, $\neq \Rightarrow$ Marie ist groß
 'Marie is taller than Anna.' 'Anna is tall.' 'Marie is tall.'

It seems to have gone unnoticed, however, that the comparative form does relate to the standard of comparison if it is combined with the additive particle *noch* in German (similarly, English *still* and Russian *jeschtscho*). The sentence in (2) clearly entails that Anna exceeds the standard of comparison for being tall, and hence Marie does. Since Marie and Anna share a standard of comparison they must be elements of the same comparison class, which is confirmed by the fact that (2) would not be appropriate if Marie were an elephant instead of a girl like Anna.

- (2) Marie ist noch größer als Anna. \Rightarrow Anna ist groß, \Rightarrow Marie ist groß
 'Marie is taller still (than Anna).'

This observation raises the question of why the particle *noch* renders the comparative sensitive to the contextually given standard of comparison. Following Löbner (1990) *noch* has two prominent interpretations, one relating to a temporal scale and the other one being additive, similar to *auch* ('too'). The temporal interpretation of *noch* may be used with comparatives, cf. (3), without, however, giving rise to the entailment that Marie is tall.

- (3) Marie ist noch größer als Anna. / Noch ist Marie größer als Anna.
 'For the time being Marie is taller than Anna.'

The additive use of *noch* comes in a stressed and an unstressed variant. In brief, the unstressed variant indicates that a different item is added, while the stressed version marks an additional item of the same type, cf. (4).

- (4) a. Otto nimmt noch einen Schnaps (nachdem er schon ein paar Bier hatte).
 'Otto has a schnaps (after drinking some glasses of beer).'
b. Otto nimmt **NOCH** einen Schnaps (nachdem er schon zwei getrunken hat).
 'Otto has a schnaps (after drinking at least one schnaps before).'

In the example in (2) *noch* is additive and has to be stressed, thus suggesting to compare it to the stressed form of the additive particle *auch* (cf. Krifka 1999). When combined with comparatives, there are two obvious differences in meaning between *NOCH* and *AUCH*. First note that, contrary to (5b), (5a) does not entail that Anna is tall. Secondly, in the case of *AUCH* there is a presupposition such that some other element has been compared to the same comparison base as used in the assertion (with respect to the same property). Thus *AUCH* in (5a) requires a preceding context comparing some other person to Anna (with respect to height). In the case of *NOCH* there is a similar presupposition but roles are reversed: *NOCH* in (5b) is appropriate only if in the preceding context Anna is compared to some other person. Thirdly, *AUCH* and *NOCH* differ with respect to the phrases fully specifying the comparison base. While in (5a) the comparison base may be spelled out referring to Anna's height, this is

ungrammatical in (5b) and we would have to use the (admittedly clumsy) phrase referring to the amount to which Anna's height exceeds Ben's height.

- (5) a. (Hans ist größer als Anna.) 'Hans is taller than Anna.'
 Marie ist AUCH größer (als Anna / als Anna groß ist.)
 'Marie is also taller than Anna / than Anna is tall.'
- b. (Anna ist größer als Ben.) 'Anna is taller than Ben.'
 Marie ist NOCH größer (als Anna / *als Anna groß ist / als Anna größer als Ben ist.)
 'Marie is taller still (than Anna / than Anna is tall / than Anna is taller than Ben).'

To sum up the above findings, in the case of *AUCH* it is presupposed that there is an additional element *z* such that *z* is taller than Anna, and it is asserted that Marie is taller than Anna. In the case of *NOCH* it is presupposed that there is an additional element *z* such that Anna is taller than *z*, and it is asserted that Marie exceeds the degree to which Anna is taller than *z*, thereby implicating that Marie is taller than Anna. Thus the crucial difference consists in the reversal of roles in the presupposition. Implementing these findings in a vague-predicate account of gradability (cf. Klein 1980) yields the representation in (6) (where *c* denotes a context, tall_c denotes the tall predicate in context *c*).

- (6) a. Marie ist AUCH größer als Anna. 'Marie is taller than Anna, too.'
 presupposed $\exists c \exists z . \text{tall}_c(z) \wedge \neg \text{tall}_c(\text{anna})$ ('*z* is taller than Anna')
 asserted $\exists c' \text{tall}_{c'}(\text{marie}) \wedge \neg \text{tall}_{c'}(\text{anna})$ ('Marie is taller than Anna')
- b. Marie ist NOCH größer als Anna. 'Marie is taller still (than Anna).'
- presupposed $\exists c \exists z . \text{tall}_c(\text{anna}) \wedge \neg \text{tall}_c(z)$ ('Anna taller than *z*')
 asserted $\exists c' \text{tall}_{c'}(\text{marie}) \wedge \neg \text{tall}_{c'}(\text{anna})$ ('Marie taller than Anna')

According to the vague-predicate account each context provides a predicate tall_c denoting the tall entities in this context, and an entity is taller than another one if there is a context such that the former is tall and the latter is not. Although in (6) the contexts of presupposition and assertion may differ from each other and from the actual one, it seems reasonable to assume that a presupposed context is at least consistent with the actual one. Now observe that in the presupposed context in (6b), but not in the one in (6a), Anna counts as tall. Assuming consistency between presupposed and actual context, the analysis in (6b) predicts that Anna counts as tall in the actual context. This finally explains why a comparative combined with *noch* is sensitive to a contextually given standard of comparison. (Note that there is no analogous argument available when employing a scalar analysis.)

It has been argued that a vague-predicate analysis of gradable adjectives is superior to a scalar analysis (cf. e.g. Kennedy 1999) because the comparative is defined in terms of the positive, thereby accounting for the fact that the positive is the unmarked form. On the scalar analysis, on the other hand, the positive is defined in terms of the comparative, and it is crucial for this analysis that only the positive relates to a contextual standard of comparison. The finding in (2) seems to provide a strong argument in favor of a vague-predicate analysis.

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