Absolute vs. Relative Adjectives: Variance Within vs. Between Individuals

Kennedy and MacNally's comprehensive taxonomy of gradable adjectives based on scale structure (Kennedy and McNally 2005; Kennedy 2007; Rotstein and Winter 2004), yields two distinct classes: (1) **absolute adjectives** such as *dirty/clean* and *full*/*empty*, which are characterized by a closed scale either on one or both ends (hence, e.g., *completely clean/#dirty* and *slightly dirty/#clean*) and, accordingly, an endpoint standard; and (2) **relative adjectives** such as *tall/short* or *expensive*/*cheap*, with an open scale (hence, *#completely/#slightly tall/short*) and, therefore, a contextual standard.

We propose that the interpretation of gradable adjectives as either relative or absolute is determined not by their scale structure but by the nature of a comparison class which is assumed to be an essential element in their decoding (cf. van Rooij to appear), and which, as we argue here, is subject to contextual considerations. The fundamental difference, on this proposal, is that in absolute adjectives the comparison class is comprised of 'counterparts' (Lewis 1986), that is, abstract realizations of the individual of which the adjective is predicated in different indices, whereas in relative adjectives it is comprised of other distinct individuals in the context.

Thus, in line with Bierwisch (1989), we suggest that the description of a shirt as *dirty* or *clean* is based on a visualization of this particular shirt in various degrees of grubbiness rather than on its juxtaposition with other concrete shirts. Crucially, the constraint on the contextual variance, and therefore the nature of the scale (whether or not it is open on one or both ends), is imposed by the individual under consideration – e.g. we can easily imagine a maximally clean counterpart of the above shirt. We contend that this endpoint, then, functions as the standard (based on Kennedy's 2007 *Economy* principle). As for relative adjectives, such as *tall* or *short*, their comparison class may comprise any of many possible category extensions, each equally salient, hence imposing equally salient natural height bounds, or no bounds at all. This explains why relative adjectives are interpreted relative to a midpoint standard as well as their vagueness.

Given a λ-categorial language (Heim and Kratzer 1998) and semantic domains D_x, D_t, D_d and D_w (sets of individuals x, truth values t, degrees d, and indices of evaluation w), let the functions f and C associate adjectives A in indices w with a degree function along some dimension (e.g., dirt, height, etc.) $f(A,w)$: $D_x \rightarrow D_d$, and a function from individuals x into comparison classes, $\lambda x \in D_x.C(A,x,w)$, s.t. A is *absolute* iff for any x_1, $C(A,x_1,w) \subseteq \{x_2 \in D_x \mid x_2 \text{ is a counterpart of } x_1 \text{ in some } v \in D_w\}$ (*relative* otherwise). World knowledge and contextual purposes (e.g. precision level) affect interpretation by restricting C(A,x,w) to counterparts of indices that are normal with respect to A, x and w (Kratzer 1981). Let POS be a function assigning adjectives A in indices w a set of instances; for a *partial* A_P (namely, an adjective whose argument's counterpart class has a natural lower bound), $POS(A_P,w) = \lambda x \in D_x, \exists y \in C(A_P,x,w), f(A_P,w)(x) > f(A_P,w)(y)$, while for a total A_T (namely, an adjective whose argument's counterpart class has a natural upper bound), $POS(A_T,w) = \lambda x \in D_x. \forall y \in C(A_T,x,w), f(A_T,w)(x) \geq f(A_T,w)(y)$. For a *relative* A_R, $POS(A_R,w) = \lambda x \in D_x. f(A_R,w)(x) \geq s(C(A_{R,}x,w))$ (cf. Kennedy 1997).

For example, *The table is dirty* is true iff the table is covered with more dirt than one of its contextually salient counterparts (so the table's degree exceeds the minimum for that table), whereas *The room is full* is true iff the room is at least as full or fuller than any of its salient counterparts (so the room's degree is the maximum for that room). Conversely, *The child is tall* is true iff the height of the child is above some midpoint standard (s(A)) based on a comparison class ranging over different individuals (the child's classmates, boys of his age, boys in general, etc.). Crucially, we do not have to assume that the scale of *tall* is linguistically construed as open on both sides. In fact, zero height exists and is captured easily by speakers. **But** the height of a child can never approach it! Nor is there a unique non-zero minimum for children in the absence of a uniquely specified comparison class. Thus, *tall* can typically refer only to positive deviations from some midpoint. It is for this reason that *tall* selects a midpoint-standard convention. The crux is that typically the bound of comparison classes of relative adjectives is simply not near the zero (or any other concrete minimum). So the standard is a (usually underdetermined) midpoint.

This analysis seems to tally with intuitive inference patterns: (a) x is full/empty $\Rightarrow$ x is as full/empty as x can be (x can't be fuller/emptier); (b) x is dirty/clean $\Rightarrow$ x can/can't be cleaner (less dirty), respectively; (c) x is tall/short $\neq>$ x is (not) as tall/short as x can be (we may infer that x can be either taller or shorter, or neither, but nothing is entailed).

On this proposal, in absolute adjectives, scale endpoints – and hence also the standard – are determined by a class of a given individual's counterparts. This accounts for various linguistic facts. Primarily, it predicts the incompatibility of *for-phrases* with absolute interpretations, e.g. #*this glass is full for a wine glass,* because the comparison class for *full* is made up of the same glass in different indices, while the *for-phrase* references a set of different glasses.

Moreover, this analysis explains the following data, which is puzzling for the standard theory. Confronted with two glasses, g_1 and g_2, both neither tall nor full, one can ask for *the tall one* but clearly not for *the full one.* The reason is that the taller of the two glasses counts as *the tall one* since the comparison class for *tall* is $\{g_1,g_2\}$. But $\{g_1,g_2\}$ is not a proper comparison class for *full*; rather, a counterpart-class is constructed separately for each glass, which includes counterparts filled to their maximum capacity – hence no glass can be referred to as *full*.

At the same time, this analysis predicts a standard-shift effect due to context sensitivity in absolute adjectives. A knife with a tiny stain may be considered to be clean in a kitchen but not in a surgery room (Cruse 1980). Similarly, the minimal and maximal possible values for **different** individuals in the same index may differ. Thus a wine glass filled up to the middle may count as *full*, while a tea cup filled to two-thirds of its capacity may be perceived as not full. In Italy, a *completely full* Espresso cup is *less full* than a *half-full* tea cup. One may even say that *when Bill is absolutely polite and Jane completely impolite*, *she is still more polite*. This data speaks against absolute scale-maxima and supports comparison-class maxima. The maximum among the counterparts in a class may be different for different entities.

In addition, our analysis predicts two options of comparing degrees of two entities x and y, for absolute adjectives. That is, x can be dirtier than y – either because the amount of dirt on x is greater: f(dirty,w)(x) > f(dirty,w)(y), or because x is covered with, for example, pretty much dust, compared to x's counterparts, and y isn't, compared to y's; in this case, x is pretty dirty, but y isn't, rendering x dirtier (cf. McConnell Ginet 1973; Kamp 1980; Doetjes 2010).

To conclude, we have moved away from the notion of semantically determined fixed scales (Kennedy 2007) and comparison classes (van Rooij to appear), suggesting instead that comparison classes are context dependent, but distinct for absolute and relative adjectives. Comparison classes highlight contextually relevant ranges of scale values. Since in absolute adjectives this range is constrained by the counterpart set of their individual argument, a bound can be determined based on what is known to be possible for that individual, which explains cases of apparent insensitivity to context (e.g., the intuitive inference patterns, the non-licensing of *for* phrases and the puzzle of the two glasses). However, different counterpart-based bounds for different individuals explain context variance in the interpretation of the positive form (standard value) and degree modifiers (e.g. *completely full*). For relative adjectives, this analysis allows to dispense with the assumption that they incorporate a lower-open scale (Kennedy 2007) by deriving midpoint standards from the convention for selecting comparison classes.