

Judge-dependence in degree constructions

The puzzle I will address is illustrated in (1-3):

- (1) a. John **finds** this cake tasty.
b. John **finds** the Dom Tower tall.
(2) a. I find apples **tastier** than bananas.
b. ??I find John **taller** than Mary.
(3) a. Roller coasters are fun **for John**.
b. *The Dom Tower is tall **for John**.

(1) suggests that dimensional adjective (DA) *tall* is judge-dependent (according to one of the diagnostics), just like predicates of personal taste (PPTs), say, *tasty* (Richard 2004; Anand 2009). (2) suggests that it's not the DA itself that is judge-dependent, rather it's its positive form, because comparative forms of DAs fail this test (2b) (Saebo 2009; Kennedy 2010; Paenen 2011). Moreover, (3) shows that the positive form of *tall* is not judge-dependent in exactly the same way as PPTs are: for example, it does not take an overt judge *for*-phrase. How can one account for the judge-dependence of *tasty* and *tall* in a way that would predict the contrasts in (2) and (3)?

I will argue that while PPTs are intrinsically judge-dependent, the judge-dependence of DAs is an indirect result of its positive form being interpreted with respect to a judge-dependent modal standard. I will show this by comparing subjective positive DAs to (other) modal degree constructions. Moreover, I will argue that the judge-dependence of DAs is of a different nature than that of PPTs.

PPTs give rise to statements whose truth is a matter of opinion rather than a matter of fact (*Roller coasters are fun* vs. *Tolstoy wrote "War and Peace"*), a property that manifests itself in a number of ways: PPTs give rise to FAULTLESS (SUBJECTIVE) DISAGREEMENT (Kölbel 2004; Lasersohn 2005 a.m.o.), embed under subjective attitude verbs like *find* (Saebo 2009), co-occur with judge *for/to*-phrases (Lasersohn 2005, 2009; Stephenson 2007a, 2007b; Pearson 2011; Paenen 2011 a.m.o.). The two competing classes of theories of PPTs differ w.r.t. the way they introduce the judge, i.e. the opinion-holder: **relativist** theories introduce a judge parameter as part of index of evaluation (Lasersohn 2005; 2009); **contextualist** theories make the judge an argument of a PPT that can be filled in contextually (Stojanovic 2007; Stephenson 2007ab). The relevant meanings are given in (4):

- (4) a. $[[\text{tasty}]^c; w:t,j] = [\lambda x_e . x \text{ tastes good to } j \text{ in } w \text{ at } t]$ RELATIVISM
b. $[[\text{tasty}]^c; w:t] = [\lambda x_e . [\lambda y_e . y \text{ tastes good to } x \text{ in } w \text{ at } t]]$ CONTEXTUALISM

The recent literature discusses reasons to prefer an analysis like (4b) over an analysis like (4a) for PPTs. First of all, Stephenson (2007a) argues that the relativistic stance is at odds with the fact that the preposition that introduces the judge (*for* or *to*) is idiosyncratically selected by the predicate. Second, Paenen (2011) uses syntactic tests for argumenthood (based on Fulst 2006) to argue that the judge PP is an argument. Finally, PPTs have been argued to impose a **direct sensory experience** requirement on its judge ('experiencer') argument, which suggests a particular type of thematic relation between the predicate and the judge: "If I have good reason to believe that shortbread is tasty, say because a reliable expert has told me so, I might say, *Apparently, shortbread is tasty*, but not, *Shortbread is tasty*" (Pearson 2011). See also (Anand 2009) about overt *for*-phrases:

- (5) *Discussing a made to order entree at a much-favored restaurant.*
Whatever she's making, it {will be, #is} tasty for me.

This requirement is even more clearly seen in Japanese, as it has a 1st person constraint on the experiencers of direct perception predicates (Kuno 1973, Kuroda 1965, Tenny 2006, McCready 2007) – a constraint that also holds for PPT judges (an evidential like *ni tigainai* 'no mistake' would save the 3rd person judge):

- (6) watasi/*John-ni-wa kono keeki-wa oishii
I/ John-DAT-TOP this cake-TOP tasty
'This cake is tasty to me / to John'

Arguably, the direct experience requirement would be naturally explained if the judge is treated as an (experiencer) argument of the PPT predicate, which has its own idiosyncratic selectional restrictions.

Introducing non-PPT judge-dependence, I first consider the positive form of DAs. Apart from the telling data in (1b), it gives rise to faultless disagreement (Richard 2004; Anand 2009; Kennedy 2010; Paenen 2011) and can be used exocentrically (Anand 2009), just like PPTs. (Saebo 2009) introduces a judge argument into the semantics of the POS morpheme in exactly the same way as for PPTs (**z** for judge, **s** for standard, **g** for measure function):

- (7) $[[\text{POS}]_{t,v}] = \lambda g \lambda x \lambda z . g_{t,v}(x) \geq s_{t,v}(z)(g)$ (= Saebo 2009:(47))

I will argue instead that judge-dependence of positive dimensional adjectives is more clearly seen from a relativist perspective. First, POS, unlike PPTs, doesn't take judge *for*-phrases (3b) (the only option being a sentence-initial *for*-phrase separated by a comma intonation: *For someone like me, this bag is heavy*). Moreover, the direct experience requirement does not hold for a POS judge, illustrated here with Japanese:

- (8) watasi/John-ni-wa kono kaban-wa omoi
 I/John-DAT-TOP this bag-TOP heavy
 'For me / For John, this bag is heavy'

Other judge-dependent degree constructions. We saw above that comparative DAs are not judge-dependent. It is not generally the case, however, that degree constructions based on DAs are 'objective'. In particular, it turns out that DA-based constructions involving a root 'normative' modality (which is known to be judge-dependent) are subjective. Examples of this are: *too*-construction, as in *This book is too long* (see Meier 2003, von Stechow et al. 2004 for a modal analysis), 'functional standard' construction, as in *This book is a bit long for a 3-yr* (Kagan and Alexejenko 2010; Bylinina 2011), and 'nominal attributive-with-infinitive' construction (nominal AIC), as in *This is a long book to assign* (Fleisher 2011). All these are judge-dependent, as seen from their ability to give rise to faultless disagreement, exocentric uses, and embeddability under *find* (we use the *find*-test again for illustration):

- (9) a. Mary finds this car {too / a bit} expensive to buy now. 'TOO' / FUNCTIONAL STANDARD
 b. Mary finds 'Middlemarch' a long book to assign. NOMINAL AIC

What these constructions have in common is root 'normative' modality, which is known to be judge-dependent, see (Saebo 2009) for an example of an entry for *ought* with a judge as an argument:

- (10) $[[ought]]_v^{f,g} = \lambda\phi\lambda z. O_v^{f,g(z)}(\phi)$ (= Saebo 2009: (54))

I will show that judge-dependence of modal degree constructions is different from that of PPTs in exactly the same ways as POS is different from PPTs – judge *for*-phrases are only sentence-initial (I will argue that sentence-internal *for*-phrases in these constructions should be analyzed as subjects of the infinitival clause) and the direct sensory experience requirement does not hold (the Japanese 1st person constraint does not hold in these constructions). Again, this points to a direction of an analysis of 'normative' judge-dependence which would be different from PPTs – namely, the relativist analysis.

I propose that all the cases of non-PPT judge-dependence that I have discussed boil down to normative (or bouletic) modality. Judge-dependent positive forms of DAs get interpreted with respect to a modal standard.

I take the semantics for a positive morpheme as developed in (Kennedy 2007):

- (11) $[[POS]] = \lambda C_{\langle et \rangle} \lambda P_{\langle ed \rangle} \lambda x_e. P(x) !> \mathbf{norm}(P)(C)$
 C = comparison class, !> = significantly exceed

Norm is thus a function that takes a measure function and a comparison class set as its arguments, and gives a degree as its output:

- (12) $[[\mathbf{norm}]] = \lambda C_{\langle et \rangle} \lambda P_{\langle ed \rangle}. \mathbf{norm}(P)(C)$

I suggest that a modal norm differs from the extensional one in that it takes modal counterparts of the members of the comparison class into consideration when defining the standard degree. The (contextually salient) proposition *p* restricts the set of worlds to consider. What this proposition would be is a matter of what the context is like (from the most general 'good states of affairs' from the speaker's perspective – to the particular purposes or wishes in mind):

- (13) $[[\mathbf{norm}_{modal}]] = \lambda C_{\langle et \rangle} \lambda P_{\langle ed \rangle}. \mathbf{norm}(P)(\lambda x. \exists w \in p \exists y [y \sim_w x \ \& \ y \in C])$

The modal in question is relativistically judge-dependent, in contrast to a PPT, which is contextually judge-dependent. This difference accounts for the puzzling data in (3).

Finally, I address the slight contrast reported in Kennedy (2010) between PPTs under *find* (perfectly acceptable) and positive forms of gradable adjectives (slightly degraded):

- (14) a. Anna finds her bowl of pasta tasty/delicious/disgusting.
 b. ??Anna finds her bowl of pasta big/large/small/cold.

Taking this contrast seriously leads to the following hypothesis: in order to appear in subjective contexts, POS needs to undergo a 'modal shift' to get interpreted with respect to a modal standard, which is a costly operation that results in decrease of acceptability.