

FUNCTIONAL STANDARDS AND THE ABSOLUTE / RELATIVE DISTINCTION*

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1 Introduction

This paper has two goals: first, we make a descriptive contribution to the discussion of *for*-phrases in degree constructions; second, we discuss how these facts are relevant for a theoretical debate on the nature of absolute vs. relative distinction within gradable adjectives.

Some degree-related *for*-phrases are shown in (1):

- (1) a. John is tall for a 3-year old.
- b. This cake is tasty for Paul.
- c. This hat is expensive for a 3-year old.

Though it might seem that there is no sharp semantic boundary between the uses of the *for*-phrases in (1) (Sassoon and van Rooij, 2012), we argue that cases like (1c) are special in several important respects that need to be documented and explained. Using the term coined by Kagan and Alexejenko (2010) for similar uses of Russian adjectival suffix *-ovat*, we call this a *functional standard* (FS) construction.

We will show that functional *for*-phrases lack the properties that have been commonly associated with degree *for*-phrases, most importantly, their combination with a relative gradable adjective is an absolute predicate (in the sense defined in Section 2). This last property will lead us to the second goal of the paper. The nature of the absolute vs. relative distinction within gradable adjectives has been subject to several recent studies (Kennedy, 2007, McNally, 2011, Solt, 2011, Sassoon and Toledo, 2011). We will focus on cases of apparent ambiguity of gradable predicates between relative and absolute interpretations. While absolute adjectives are known to have relative uses available systematically (Kennedy, 1999, Kennedy and McNally, 2005),¹ the opposite –

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¹As an example, *dry* is a typical absolute adjective, but one can set up a context in such a way that a relative reading would be available, arguably, when *dry* is used to describe a permanent, stable property such as the average degree of moisture in the atmosphere, as in *The glasses are dry* vs. *This region of the country is dry*. For further discussion see (Kennedy and McNally, 2005:6.2).

relative adjectives appearing with absolute-like interpretation – has not been documented. We believe that the FS construction is precisely the case of a relative-to-absolute shift (or ambiguity, to be discussed as we proceed), and as such it can be instructive about what it takes to be an absolute predicate. We discuss more cases of this kind of shift, and we will be particularly interested in the so called Attributive-with-Infinitive construction (Fleisher, 2008, 2011). We observe that in all known cases of absolute interpretation of relative predicates there is modality involved, and we speculate about reasons why this should be so.

The paper is organized as follows: we introduce the theoretical issue first (Section 2), and then move to the *for*-phrase constructions (Sections 3 and 4). We describe the FS *for*-phrases and their special properties compared both to known *for*-phrase constructions and the *too*-construction. In Section 5, we argue that the FS construction involves an absolute standard, as well as the Attributive-with-Infinitive construction, discussed in Section 6. Then we turn to further issues.

2 Absolute and relative gradable adjectives

We will use the mainstream semantics for gradable adjectives that treats them as measure functions of type $\langle e, d \rangle$ from the domain of individuals to degrees (Bartsch and Vennemann, 1972, 1973, Kennedy, 1999, 2007): $\llbracket \text{tall} \rrbracket = \lambda x. \mathbf{tall}(x)$, where $\mathbf{tall}(x)$ is x 's height. Measure functions are converted into properties of individuals by degree morphology (comparative morphemes, intensifiers etc.). For the unmarked positive form (as in *John is tall*) a null POS morpheme is introduced, where \mathbf{d}_s is 'contextually appropriate standard of comparison, whatever that is' (Kennedy, 2007):

$$(2) \quad \llbracket \text{POS} \rrbracket = \lambda g \lambda x. g(x) \succeq \mathbf{d}_s$$

What would be a more precise way to describe \mathbf{d}_s ? An intuitively plausible candidate for \mathbf{d}_s would be an average degree over the comparison class. There are two problems with this option though. First, as observed by Bogusławski (1975), under this view the following sentence should be a contradiction, which it is not:

- (3) Nadia's height is greater than the average height of a gymnast, but she is still not tall for a gymnast.

The second counter-argument comes from the Sorites paradox: if the standard is an average, we wouldn't expect to see the positive form to create instances of the Sorites paradox, since the average represents a crisp cut-off point.

These observations motivated the 'significance' component that is sometimes introduced into the semantics of a positive form of adjectives like *tall* (Fara, 2000, Kennedy, 2007):

$$(4) \quad \llbracket \text{POS tall} \rrbracket = \lambda c \in D_{\langle e, t \rangle} \lambda x. \mathbf{tall}(x) !\succ \text{norm}(\mathbf{tall})(c)$$

c = comparison class, $!\succ$ = significantly exceed

There have been different alternative proposals on how the relevant facts can be captured, for example, standard as a range rather than a point on the scale (von Stechow, 2006, Solt, 2011). This area on the scale contains an average over the comparison class, but the width of this range is influenced by various contextual factors.

What is important for us is that the above is only applicable to a subclass of gradable adjectives, namely, relative gradable adjectives like *tall*. There is a substantial literature on the distinction between relative adjectives and absolute adjectives such as *closed* (Unger, 1975, Rotstein and Winter, 2004, Kennedy and McNally, 2005, Kennedy, 2007, Sassoon and Toledo, 2011, McNally, 2011).

Semantically, three differences between relative and absolute adjectives have been identified (Kennedy, 2007, Sassoon and Toledo, 2011, McNally, 2011). First, the truth value of sentences with positive forms of relative adjectives is context-dependent, while that of absolute adjectives is not:

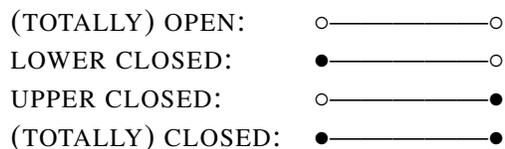
- (5) a. Compared to her friend Andrea, Marta is tall.
b. ??Compared to Door #1, Door #2 is closed.

Second, absolute adjectives do not give rise to the Sorites paradox, as they yield crisp judgments in the positive form (if we open a door which is closed even the smallest amount, we can easily determine that the door will no longer be closed). A third, related property is the existence of borderline cases for which it is difficult or impossible to decide whether the relative adjective truthfully holds or not; absolute adjectives in general lack these borderline cases.

We will address certain complications to this picture later, but from what was said now it is quite clear that there is a difference between the kinds of standards relative and absolute adjectives make use of in the positive form. This difference manifests itself linguistically in degree modifier distribution (Rotstein and Winter, 2004, Kennedy and McNally, 2005):

- (6) a. ??perfectly/??slightly {tall, deep, expensive, likely}
b. ??perfectly/??slightly {short, shallow, inexpensive, unlikely}
- (7) a. ??perfectly/slightly {bent, bumpy, dirty, worried}
b. perfectly/??slightly {straight, flat, clean, unworried}
- (8) a. perfectly/??slightly {certain, safe, pure, accurate}
b. ??perfectly/slightly {uncertain, dangerous, impure, inaccurate}
- (9) a. perfectly/slightly {full, open, opaque}
b. perfectly/slightly {empty, closed, transparent}

The patterns of degree modification are traditionally explained with the help of the differences in the structure of scales encoded by gradable adjectives (Kennedy and McNally, 2005, Kennedy, 2007):



Adjectives that make use of a scale that is closed at least at one end are absolute adjectives, adjectives with totally open scales are relative ones. The question that still needs to be answered is the following: what role exactly does the scale structure have in determining the kind of a standard an adjective in its positive form will use, and what exactly the degree modifiers in (6-9) are sensitive

to? Keeping the single semantic type $\langle e, d \rangle$ for all gradable adjectives, Kennedy (2007) derives the observable differences between absolute and relative ones from a combination of conventional properties of the adjective (scale structure) and a more general principle of interpretation:

- (10) **Interpretive Economy:** Maximize the contribution of the conventional meanings of the elements of a sentence to the computation of its truth conditions. (Kennedy, 2007:36)

The principle ensures that the conventionally determined standard (maximal or minimal) will be preferred over a contextually determined standard when an adjective's scale is closed. For relative adjectives, there will be no conventionally provided degree to serve as a standard, and the standard has to be chosen contextually.

Several alternative approaches to the absolute / relative distinction have been formulated recently. (McNally, 2011) and (Sassoon and Toledo, 2011) argue that the difference lies not in the scale structure of the predicates itself, but rather in the nature of the properties denoted by gradable adjectives, and the scale structure just correlates with this deeper distinction.

(McNally, 2011) proposes to model the truthful predication of relative adjectives as CLASSIFICATION BY SIMILARITY, and the truthful predication of absolute adjectives as CLASSIFICATION BY RULE. The two kinds of classification have been described as distinct cognitive processes by Hahn and Chater (1998). Classification by similarity requires only partial match between the classification criterion/a and the relevant properties of the object and involves comparing a specific individual against another specific individual. On the other hand, classification by rule requires strict matching; a specific individual is compared (fullness of a specific glass) against a more abstract representation (fullness for glasses in general).

Under this view, importantly, nothing forces an absolute (rule-based) standard to be a minimum or a maximum on a scale. As McNally notes, though it would be a perfectly natural and easy rule to use a zero or a maximum value as a standard, other cases should be attested as well. And there are indeed several cases like that; one example is *full* when applied to a wine glass, which is normally considered full if it is filled to about half of its capacity with wine. Though it is not a maximal standard, it arguably behaves like the standard of an absolute adjective. It is not compatible with *compared to*-phrases, it licences crisp judgements and thus does not give rise to the Sorites paradox; and finally, it is argued not to yield borderline cases. Thus, it can be seen as an instance of an absolute standard.

A related, though different approach is described in (Sassoon and Toledo, 2011). The proposed difference between absolute and relative adjectives boils down to VARIANCE WITHIN/BETWEEN INDIVIDUALS: an adjective is interpreted based on variance **between** individuals iff the comparison class never includes different counterparts/stages of the same individual (giving rise to a relative interpretation); an adjective is interpreted based on variance **within** an individual iff the comparison class only includes different counterparts/stages of the same individual (absolute interpretation).

Thus, absolute adjectives are essentially modal, while relative adjectives are essentially extensional. The extent to which the two approaches are compatible can be a matter of debate, but the important point to make is that they both analyse absolute adjectives non-extensionally.

(Solt, This volume, Sassoon, This volume) discuss low degree modifiers like *slightly* as tests for the absolute/relative distinction, and types of standards they are compatible with. In line with the discussion above, Solt concludes that it is not exactly the scale structure that *slightly* is sensitive to. Rather, it is the fuzziness of the relative standard that precludes reasoning about small differences

around the standard. She proposes that, crucially, relative standards are arbitrary, i.e. there are multiple equally acceptable choices. The semantics for *slightly A*, as formulated in (Solt 2011), makes explicit that *slightly* does not pick any special kind of standard (**min**, **max** or **rel**), it just needs the possibility of reasoning about small differences:

$$(11) \quad \llbracket \text{slightly } A \rrbracket = \lambda x. d_{\text{STD:A}} < \mu_{\text{DIM}(x)} < d_{\text{STD:A}} + \delta, \text{ for small } \delta$$

Presumably, any way of making the standard more precise would suffice to turn a relative-like standard into an absolute-like one, without intensionality playing a role.

We believe that the FSs can provide some interesting insights relevant for this debate. We now turn to the *for*-phrase data.

3 *For*-phrases and functional standards

Recall the sentences with *for*-phrases in (1), repeated here with two new examples added:

- (12) a. John is tall for a 3-year old.
 b. This cake is tasty for Paul.
 c. The store is crowded for a Tuesday (Solt, 2011)
 d. Mia wants an expensive hat for a three year old (Schwarz, 2010)
 e. This hat is expensive for a 3-year old.

The role of *for*-phrases is different in sentences (12). (12a) illustrates a *comparison class* (CC) *for*-phrase, (12b) includes a *judge* PP, and (12c-e) constitute a part of *for*-phrase landscape that has been subject to some recent attention in the literature (Schwarz, 2010, Solt, 2011, Sassoon and van Rooij, 2012).

CC *for*-phrases as in (12a) only appear with relative gradable adjectives. They overtly restrict the set of individuals that are taken into account while computing the relative standard (Kennedy, 2007, Bale, 2008, Solt, 2011) (for a detailed discussion on how this effect is achieved compositionally, see (Sassoon and van Rooij, 2012)). Since absolute adjectives have a fixed standard, CC *for*-phrases do not usually appear them:

- (13) a. John is tall / short for a 3-year old.
 b. #This towel is wet / dry for a used towel.
 c. #This glass is full / empty for a wine glass.

One more defining property of CC *for*-PPs is the presupposition that the subject of the gradable predicate is a member of the set denoted by the DP inside the CC *for*-phrase (Kennedy, 2007, Bale, 2008):

- (14) John is tall for a basketball player \longrightarrow John is a basketball player.

The last relevant property, which is related to the previous one, is that the DP inside the *for*-phrase, cannot be an individual-denoting one:²

²In fact, it seems that it is not enough to require a CC *for*-phrase to denote more than one individual, cf. **John is tall for John and Bill* and **John is tall for my kids*. We readdress that issue in the discussion section.

(15) *John is tall for that boy.

Judge PPs as in (12b) are limited to so-called *predicates of personal taste* like *tasty*, *fun*, *interesting* etc., a subset of relative gradable adjectives (Lasersohn, 2005, Stephenson, 2007, Paenen, 2011, Pearson, To appear). This class is characterized by the lack of objective ordering of individuals on the scale lexicalized by the adjective, the ordering that would be provided by the real world independently of any experiencer. The judge *for*-phrase provides the source of the ordering of objects along some subjective scale. This lexical difference manifests itself, for example, in the ways these adjectives are embedded under attitude verbs like English *find*, which requires subjectivity in the dependant clause (Paenen, 2011):

- (16) a. John finds apples tastier than bananas.
b. *John finds Mary taller than Jane.

In contrast to CC *for*-phrases, judge PPs can contain an individual-denoting DP (12b) and they do not induce a presupposition of inclusion even in case they are plural. In addition, judge *for* alternates with *to*:

- (17) a. This food is tasty for/to teenagers.
b. What she said was very important for/to me.

Moving to more complicated cases in (12c-e), temporal *for*-phrases like (12c) are discussed in (Solt, 2011), and are argued to be a special case of CC *for*-phrases. The comparison class is the set of all Thursdays, and though there is no presupposition that the subject is a member of that set, there is a similar presupposition that the event described in the sentence takes place on Thursday.

(12d) is also problematic for a simplistic view on *for*-phrases outlined above. It illustrates a so-called ‘mediation problem’ (Schwarz, 2010): there is an inclusion relation between the sentential subject (Mia) and a set denoted by the *for*-phrase (3-year-old children), but not between the subject of the gradable predicate (hat) and the *for*-phrase set, as one would expect. The two subjects are linked by some kind of ‘mediation relation’:

- (18) a. Mia has an expensive hat for a 3-year old.
b. {x: x is a 3-year old} ↔ *mediation* ↔ {y: y is a hat of a 3-year old}

Schwarz gives an analysis in terms of scoping POS morpheme, which allows for a derived gradable predicate that would satisfy the usual definition of a CC *for*-phrase construction:

(19) Mia POS [λd [has a [d expensive] hat] [**for a 3-year old**]].

Thus, with some additional mechanisms, (12c) and (12d) fall under familiar CC *for*-phrase class.

We now turn to the cases like (12e), which, as we will argue, are different from both CC and judge *for*-phrases in several important respects and constitute a separate underdescribed class of degree *for*-phrases.

(12e) This hat is expensive [for a 3-year old].

- (20) a. This soup is somewhat hot [for me].
 b. This puzzle is complicated [for John].
 c. This pool is a little bit deep [for my daughter].

We call the construction that we are describing a FUNCTIONAL STANDARD (FS) construction, following Kagan and Alexejenko (2010) who use this term for certain uses of the Russian degree modifying adjectival suffix *-ovat*. The following is their key example:

- (21) Takije kabluki dlja menja vysok-ovat-y.
 such heels for me high-ovat-PL.NOM
 ‘Such heels are somewhat too high for me’

(21) says that the degree that the heels reach on the scale of height is slightly greater than the highest degree that would be good for me to wear. Crucially, there seems to be a ‘purpose’ involved (the speaker wearing certain shoes), defining a degree interval compatible with this purpose; its maximum is used as a standard of comparison.

Similarly, in (12e) it seems that there is an implicit ‘purpose’-like proposition involved in interpretation of the sentence, with respect to which the position of the subject individual on a scale encoded by the adjective can be relevant. In the case of (12e), the ‘purpose’ is buying a hat for a 3-year old child, for which the price of the hat is relevant; in (20b) the ‘purpose’ can be that John solves the problem, etc.

(Kagan and Alexejenko, 2010) treat the FS reading as a peculiarity of lexical semantics of *-ovat*, but we believe these readings to be a much more general phenomenon. We clarify their relation to low degrees as we proceed.

The semantics of FS *for*-phrases cannot be reduced to that of CC- or judge *for*-phrases. First, as opposed to CC *for*-phrases, DPs in *for*-phrases in (20) can denote an individual; second, there is no inclusion presupposition between any of the participants of the situation and the *for*-phrase set (even if we include times and places; and even if we postulate scoping POS). Third, as opposed to judge PPs, FS *for*-phrases in (20) combine with gradable predicates with objective ordering on a scale (objects can be ordered by price, temperature etc. independently of any observer), thus the role of *for*-phrases in (20) has to be different from the role of judge PPs when combined with predicates of personal taste.

One possibility to discuss is that the FS *for*-PPs can still be instances of judge PPs, but in a slightly different sense. Paenen (2011) notes that positive forms of relative adjectives exhibit at least some of the properties associated with subjectivity. For example, as we showed in (16), embedding under attitude verbs differentiates predicates of personal taste from other gradable predicates, but not in the positive form:

- (22) a. John finds apples tastier than bananas.
 b. *John finds Mary taller than Jane.
- (23) a. John finds apples tasty.
 b. John finds Mary tall.

(Paenen 2011) proposes that the ordering is not the only source of subjectivity in positive constructions. The theory of *split subjectivity* identifies a second point of subjectivity – namely, the standard used by relative POS. According to Paenen, the perspective for the relative standard is

by default fixed to a speaker, but in principle nothing prevents it from being manipulated overtly. One could argue that in (20) it is indeed introduced by the *for*-phrase. We think that this kind of interpretation might be available for at least some of the examples we are discussing, but we crucially argue that the construction we are dealing with has different properties and different semantics. One argument for this comes from the *for / to* alternation that judge PPs are known to demonstrate, but that is generally not available in sentences like (20):

- (24) a. ??This hat is expensive to a 3-year old.
 b. ??The puzzle is complicated to John.
 c. ??This pool is a little bit deep to my daughter.

Furthermore, semantically, a judge is usually taken to be an individual, while FS *for*-phrases can not only be individual- and set-denoting, they can also include a situation-denoting DP:

- (25) a. This puzzle is complicated for the first lesson.
 b. This car is expensive for our show.

Intuitively, even those cases when the FS *for*-phrase contains an individual, it is an argument in an implicit proposition which defines the standard of the gradable predicate, as discussed above. Nothing like that is usually taken to be part of judge PP semantics in degree constructions.

One more key property of the FS *for*-phrase construction that we want to elaborate on a little bit more is the distribution of low degree modifiers like *slightly*. Section 2 introduced degree modifier distribution as a test for relative vs. absolute adjectives. We repeat the part that involves low degree modifiers:

- (26) a. ??slightly {tall, deep, expensive; short, shallow, inexpensive; certain, safe, pure}
 b. slightly {bent, bumpy, dirty; uncertain, dangerous, impure; full, open; empty, closed}

Relative adjectives do not easily combine with low degree modifiers. CC *for*-phrases and judge PPs preserve this pattern:³

- (27) a. ??/#John is slightly tall for a basketball player.⁴
 b. ??This soup is slightly tasty for me.

Importantly, though, the FS *for*-phrases make relative adjectives perfectly compatible with low degree modifiers:

- (28) a. This swimming pool is {slightly / a little bit / somewhat} deep for a 3-year old.
 b. This mountain is {slightly / a little bit / somewhat} far for me.
 c. This car is {slightly / a little bit / somewhat} expensive for someone like me.

We provide an explanation for this fact in Section 5.

³For a discussion of what kind of interpretation can be forced for these kind of sentences by those speakers who accept them at all, see (Sassoon, This volume).

⁴The sentence is fine without the inclusion presupposition, which means it is not a CC construction under this reading. We will further discuss sentences like this in the last section.

Summing up the conclusions reached so far, we identify a type of degree-related *for*-phrase that is clearly distinct from the other known type of *for*-phrases, such as CC *for*-phrases and judge PPs. The key properties of this construction, which we call the FS construction, are non-presuppositionality, implicit ‘purpose’ semantics, and compatibility with low degree modifiers.

The next section explores how functional standards are similar and different from the *too*-construction.

4 Functional standards and *too*

The way we described the FS construction so far is reminiscent of degree constructions with *too*:

- (29) a. This swimming pool is too deep for a 3-year old.
 b. This mountain is too far for me.
 c. The music is too loud for me.

In (29), there is a modal ‘purpose’ involved (for (29a), it would be a 3-year old child swimming in the pool), defining a set of possible worlds compatible with it, which, in its turn, defines an interval of degrees compatible with it, maximum used as a standard of comparison. So far, the semantics of *too*-constructions is parallel to that of FS construction.

(von Stechow, 2003, von Stechow et al., 2004) provide an explicitly modal analysis for *too*. The main idea of the analysis is that there is a covert modal in the complement of *too*, so that, basically, *Bertha is too old* means *Bertha is older than she may/can_H be* given a circumstantial modal base H that is determined by the context (w^* stands for the actual world):

- (30) *Bertha is too old* \approx *Bertha is older than she may/can_H be* (von Stechow et al., 2004:75b)
 $\{d \mid \exists w : w \in H_{w^*} \ \& \ \text{AGE}_w(\text{Berta}) \geq d\} \subset \{d \mid \text{AGE}_{w^*}(\text{Berta}) \geq d\}$

Crucially, the semantics of *too* is decomposed into a comparative morpheme and an existential modal. So under this account, *too* directly binds the degree variable of the gradable predicate, thus the positive form of the adjective is not involved in this construction.

This decision is independently supported by the facts from measure phrase (MP) distribution. MPs are quite often assumed to be tailor-made for comparative constructions rather than for bare gradable adjectives (Schwarzschild, 2005). Comparative constructions generally co-occur with MPs without restrictions, while bare adjectives’ behaviour differs from language to language a great deal, there are quite a lot of languages that completely disallow MPs with bare adjectives, etc. The class of adjectives that allow for an MP is also quite chaotic within a language, say, English:

- (31) a. John is 20cm taller than Mary.
 b. This car is \$500 more expensive than that one.
 (32) a. John is 1.80cm tall.
 b. *This car is \$15000 expensive.

A proposal made in (Schwarzschild, 2005) argues for a type mismatch between bare adjectives and MPs. The rare and unpredictable alleged exceptions are a result of a type-shift of an adjective, and a possibility for this shift is probably specified in the lexicon.

As expected, *too*-constructions are known for being compatible with MPs:

- (33) a. This car is \$5000 too expensive for someone like me.
 b. This swimming pool is 2m too deep for a 3-year old.
 c. This mountain is 5km too far for me.

Should we adopt the same comparative semantics for FSs? We believe that the answer is negative. The fact that we would like to draw attention to is that the FS construction is not compatible with MPs:

- (34) a. *This car is \$5000 expensive for someone like me.
 b. *This swimming pool is 2m deep for a 3-year old.
 c. *This mountain is 5km far for me.

We propose to explain this fact by assuming that FS constructions are positive constructions rather than comparative ones. More technically, FS constructions contain a positive morpheme, while *too* binds the *d*-argument of an adjective directly. This means that FS- and *too*-constructions are not synonymous, or at least that the similar semantics is achieved in a different way compositionally.

Adopting the modal semantics von Stechow (2003), von Stechow et al. (2004) develop for a standard of the *too*-comparative and combining it with the positive morpheme, we get something like the following (**R** is a relevant relation between the the object of the *for*-phrase and the subject of the gradable predicate):

- (35) $\llbracket \text{POS expensive for a 3-year old} \rrbracket = \lambda x. \text{PRICE}(x) \geq \mathbf{max}\{d \mid \exists w : w \in H_{w*} \ \& \ \text{PRICE}_w(x) \geq d \ \& \ \mathbf{R}_w(x)(\mathbf{3yo})\}$

In prose, for *POS expensive for a 3-year old* to hold of *x*, *x*'s price needs to exceed the maximum price that would still make *x* fit the 'purpose'.

Summing up what we have so far, FS construction is a positive construction (unlike constructions with *too*) that is distinct from other known types of degree *for*-phrase construction (with CC *for*-phases and judge PPs) and involves a proposition which defines a standard for the positive relative adjective.

5 Functional standards are absolute

One of the surprising properties of FSs discussed above is their perfect compatibility with low degree modifiers, otherwise unexpected of the relative adjectives participating in this construction, as shown in (28).

What could one make of this fact? If we take low degree modifier distribution as a test for an absolute standard, we may conclude that there is an absolute standard involved in sentences in (28). Indeed, the very possibility of reasoning about small intervals around the standard indicates that the standard is not a very fuzzy one, which has been argued to be a key property of absolute standards.⁵

⁵It would be wrong to say that all cases in (28) lack any vagueness. Quite like classic absolute adjectives like *clean*, they are characterized by certain indeterminacy that can have three sources: limits of our ability to measure; granularity

Summing up, in construction with a FS *for*-phrase, relative adjectives behave like absolute ones. In particular, they use a maximum of the degree interval defined by an implicit ‘purpose’ as their absolute standard in the positive form, as indicated in (35).

There are at least two ways to achieve this effect compositionally. The first option would be to locally combine the *for*-phrase and the adjective, so that the *for*-phrase would pick a certain point on the adjectival scale (namely, the maximum degree compatible with the purpose), which would make a derived predicate true of all the objects that score above this point, and everything below will be false. One could view this as subtraction operation:

$$(36) \quad \llbracket \text{expensive}_{\text{for-a-3yo}} \rrbracket = \lambda x. \text{PRICE}(x) - \mathbf{max}\{d | \exists w : w \in H_{w*} \ \& \ \text{PRICE}_w(x) \geq d \ \& \ \mathbf{R}_w(x)(\mathbf{3yo})\}$$

However, this is not the only way to do it. One could go for a more contextual option, assuming that a FS *for*-phrase does not need to be compositionally combined with the adjective to have an effect on the kind of standard the adjective picks in its positive form. One could say that this effect is more indirect and is achieved via changing the context, which is then in turn used by the positive morpheme to infer a standard. One could assume that the FS *for*-phrase introduces a very salient degree on the adjectival scale – namely, the maximum on the purpose interval – that then gets naturally picked as a standard in the positive form.

Note that this choice is parallel to the discussion about the role of CC *for*-phrases in degree constructions: they have been argued to combine with the adjective directly and restrict the adjectival scale in some way (Kennedy, 2007, Bale, 2008, Sassoon and van Rooij, 2012), and to affect the contextual *comparison class* parameter of a positive morpheme, overtly restricting the comparison class to the CC *for*-phrase set (Fulst, 2006, Solt, 2011).

For CC *for*-phrases, the latter, contextual alternative does not seem immediately unexpected, as both the unmodified adjective and the CC *for*-phrase constructions exhibit the properties of relative gradable predicates in the positive form, and the standard that is used in this case is known to be contextual, or context-sensitive. Absolute predicates, on the other hand, use standards that are generally conventional and not context-sensitive (recall the Interpretive Economy Principle (10)). If this is true, the second option for integrating FS *for*-phrases in the derived absolute predicate is immediately out for conceptual reasons.

In the next section, we discuss a construction that resembles the FS construction that would help us illustrate that the latter, contextual way of shifting relative standard to an absolute one is at least a possibility.

6 Attributive-with-infinitive construction (Fleisher, 2011)

Fleisher (2011) discusses a construction he calls nominal Attributive-with-Infinitive (AIC) construction, illustrated in (37):

(37) a. *Middlemarch* is a long book to assign.

as part of ‘loose talk’ (Lasersohn, 1999); borderline cases inherited from the non fully defined application criteria in rule-based categorisation (McNally, 2011). We believe the last source of vagueness to be particularly important in FS construction. Consider *expensive for me now* evaluated over a certain rather long and vague period of speaker’s life (the relevant factors can include his current income level etc.), and him/her having \$110 in his/her wallet in the precise moment the sentence is uttered.

- b. Bob is a short guy for the Lakers to draft.

Nominal AICs in (37) have an interpretation of inappropriateness associated with them. In (37a), we have the sense that *Middlemarch* is inappropriately long for the purpose at hand, i.e., for an act of assigning. Given this connection to a purpose, the semantics of this construction is very similar to that of FS constructions that we discuss. However, in nominal AICs, the purpose in question is expressed by the gapped infinitival clause rather than a *for*-phrase.

The infinitival clauses found in nominal AICs appear to have structural and interpretive characteristics of both infinitival relative clauses (IRCs) and degree complement clauses (such as comparative *than* or equative *as* clauses), and Fleisher convincingly argues that the former and not the latter is the correct analysis. More specifically, IRCs in nominal AICs do not form a constituent with Adj(P)/Deg(P), rather they are low NP adjuncts, like regular IRCs. The following minimal pairs are an easy superficial way to see this, illustrating that the infinitival clause is only grammatical in the presence of a head noun:

- (38) a. *Middlemarch* is a long book to assign.
 b. ??*Middlemarch* is long to assign.

Fleisher uses further arguments from idiom interpretation, quantifier scope, and restricted position of IRCs to argue that IRCs in AICs are indeed regular IRCs, and the inappropriateness semantics needs to be derived in a more flexible way than the direct composition with the adjective would suggest.

The solution Fleisher proposes relies on the bouletic modal semantics of IRCs and the context-sensitive semantics of the positive morpheme, crucially with the ‘significance’ component. Not going into the technical details of the analysis, we can sum up the intuition behind it as follows: if an object significantly exceeds a degree that is highly desirable and suitable given a certain purpose with respect to a certain dimension, it no longer fits the requirements of a desired situation; hence the inappropriateness semantics.

We believe this analysis to make a wrong prediction about compatibility of AICs with low degree modifiers:

- (39) a. *Middlemarch* is a slightly long book to assign.
 b. Bob is a slightly short guy for the Lakers to draft.

If the usual relative fuzzy standard is involved in the interpretation of nominal AICs, the low degree modifiers are expected to be out, as crisp judgments would generally be unavailable in this situation. We also point out that the reasoning about the Sorites paradox and the (relative) lack of borderline cases from the previous section applies to nominal AICs as well. I.e. if the infinitival clause is crisp enough, the gradable predicate will have a crisp standard as well, quite like with FSs. The crispness of (39b) directly depends on the crispness of criteria the Lakers have for the height of their team members. In case there are strict rules (say, the players should be taller than 190cm), the Sorites paradox will not arise for (39b), as the precise boundary between true and false will be crossed eventually, and the second premise will not hold.

Thus we believe that, quite like the FS construction, nominal AICs contain a source of a salient point on the scale, defined with the help of a certain modal rule – maximum degree compatible with a certain proposition. The internal semantic structure of infinitivals in AICs and

for-phrases in FS constructions thus is hypothetically similar: they contain a possibility modal that is responsible for a maximal degree reading and a circumstantial modal base *H*, sensitive to context (e.g. ‘*Middlemarch*’ is a long book to assign \approx ‘*Middlemarch*’ exceeds the length that it may/can_H reach).⁶

What is important about AICs for us is that the infinitival clause is not compositionally combined with the AdjP or DegP, thus illustrating the option of a **contextual absolute standard**. This option can serve as an additional argument against a mainstream Interpretive Economy-based accounts of the absolute/relative distinction, supporting the view that conventional scale structure is not directly responsible for the type of standard a predicate can make use of (Solt, This volume, McNally, 2011).

7 Discussion

We discussed one particular type of *for*-phrases in degree constructions (functional standard *for*-phrases) and concluded that this construction has an absolute-like positive interpretation and involves a modal ‘purpose’ contributed by the *for*-phrase.

Finally returning to one of the two goals of this paper, we can now ask: is it the case that modality is always involved in the relative to absolute shift?

From what we have seen, the tendency seems clear, and it is in line with McNally’s analysis and compatible with (Sassoon and Toledo 2011): for a standard to be absolute (=precise), there has to be a rule involved. The idea of a rule can be naturally linked to a modal statement with circumstantial modal base in combination with various kinds of ideals (‘root’ modal interpretations – bouletic, deontic or teleological) as ordering sources on possible worlds. Thus, the rule would be understood as a certain state of affairs that should hold in good worlds. Say, in all worlds where the restaurants serve wine properly, as it should be served, the full wine glasses are half-filled with wine.

Now, the next question is, can there still be extensional rules? McNally (2011) discusses the adjective *tall* and an option of a rule that would just stipulate a specific height value as the standard. In principle, nothing precludes such a rule from existing, though, as McNally notes, “in the context of everyday language use this simply might not be feasible often enough.”

Stephanie Solt (p.c.) suggests precisely this kind of a rule to operate in the following class of contexts: looking at height statistics for children grouped by age, one can plausibly say something like *Mary is slightly tall for a 3-year old*, meaning that Mary exceeds the particular precise height listed in the statistics, by a small degree. We want to point out that in this context the degree of height reported in an official statistics chart can be treated as some kind of a ‘norm’, giving rise to a bouletic or a deontic circumstantial modal again. There are empirical points to clarify – i.e. whether the *for*-phrase here has usual properties of a CC *for*-phrase (is it presuppositional?).

Further issues that need to be addressed in the future work are the following: how exactly do the functional *for*-phrases describe the purpose (we believe that a clausal analysis of degree *for*-phrases is needed)? what kinds of modality can be found in FS *for*-phrases and how can one account for the observed restrictions in an enlightening way? We leave these questions open for now.

⁶For an observation that possibility in the standard of comparison gives rise to a **max** reading and necessity gives rise to a **min** reading see (Heim, 2001): *The paper is longer than allowed* (= above **max**) vs. *The paper is longer than required* (= above **min**).

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