

Degree Modification in Russian Morphology: The Case of the Suffix *-ovat*

In this paper, we investigate the semantics and distribution of the adjectival suffix *-ovat* in Russian, found in such adjectives as *sladkovatyj* ‘slightly sweet’ and *velikovatyj* ‘a little bit too big’. We argue that this suffix functions as a degree modifier, similarly to comparative morphemes. We propose that it imposes a relation between two degrees on the scale lexicalized by the adjectival root – the maximal degree, to which the property holds of the individual argument of the adjective, slightly exceeds the standard of comparison.

Intuitively, *-ovat* is associated with such interpretations as “slightly” and “a little bit”. However, it turns out that with different stems it seems to make a different contribution. With some adjectives, its meaning is comparable to that of the English *too* (with the further restriction of ‘a little bit too’). Thus, *vysokovatyj* is understood as ‘a little bit too high’ (for a certain purpose), *dlinnovatyj* mean ‘a little bit too long’, etc. In contrast, with other adjectives, such a meaning is not contributed; rather, *-ovat* entails that the property lexicalized by the stem holds of the argument to an intuitively low degree. For example, the argument of *sladkovatyj* is understood to be characterized by the property of sweetness to a low degree (i.e. to contain glucose, but only a very small amount of it); it is thus not entailed to be sweet. *Gluxovatyj* (*deaf*+ *-ovat*) denotes a property of individuals who cannot hear perfectly, but, at the same time, are not completely deaf. Another curious fact about the investigated suffix is that it can attach to some adjectives but not to others. For instance, it is incompatible with such adjectives as *žyvoj* ‘alive’ and *mjortvyj* ‘dead’; thus, **žyvovatyj* and **mertvovatyj* are not acceptable forms. More interestingly, in many pairs of positive and negative adjectives that lexicalize the same scale, the suffix can attach to only one member of the pair, e.g. *grjaznovatyj* (dirty+ *-ovat*) / **čistovatyj* (clean+ *-ovat*); *ploxovatyj* (bad+ *-ovat*) / **xoroševatyj* (good+ *-ovat*); *dorogovatyj* (expensive+ *-ovat*) / **deše(vo)vatyj* (cheap+ *-ovat*). In other pairs, both the positive and the negative member can combine with the suffix, e.g. *dlinnovatyj* (long+ *-ovat*) / *korotkovatyj* (short+ *-ovat*).

We assume that gradable adjectives denote relations between individuals and degrees and are of the type $\langle d, \langle e, t \rangle \rangle$ (e.g. Heim 2000). We propose that *-ovat* is a degree modifier whose semantic contribution is formally represented in (1):

$$(1) \lambda P_{\langle d, \langle e, t \rangle \rangle} \lambda d' \lambda x_e. \max \{d: P(d)(x)\} > d' \wedge (\max \{d: P(d)(x)\} - d' < d_c)$$

In prose, the suffix specifies that the maximal degree d to which a property P holds of an individual x is higher than another degree d' (the standard of comparison, whose source will be discussed below). It further specifies that the difference between the two degrees is relatively low, i.e., lower than d_c , which represents a contextually provided expectation value.

The first thing to note is that this analysis predicts correctly that *-ovat* cannot attach to a non-gradable adjective. As pointed out by Kennedy and McNally (2005), degree modifiers require their adjectival argument to be gradable. If it is not gradable, a type mismatch results. Hence the unacceptability of such adjectives as **žyvovatyj* and **mjortvovatyj*.

Further, the analysis in (1) allows a unified treatment of *-ovat*, even though the contribution of the suffix seems to be different with different stems, as demonstrated above. The differences, we propose, result from the nature of the standard of comparison, to which the function applies. The latter, in turn, is predictable on the basis of the type of scale lexicalized by the adjective.

We begin with absolute adjectives that lexicalize totally or partially closed scales (in the sense of Kennedy and McNally 2005) and are lexically oriented at a minimum or maximum standard. With such adjectives, it is this standard that *-ovat* applies to. For instance, consider the adjective *sladkij* ‘sweet’. We assume that it lexicalizes a lower bound scale which has a minimal but not a maximal value (an entity can be absolutely not sweet, but not absolutely sweet). The

result of application of *-ovat* to the stem *sladk-* reveals the representation in (2a): The maximal degree to which the argument of the resulting adjective is sweet slightly exceeds the standard of comparison. The resulting function applies to the standard of comparison associated with the stem, and we get the meaning in (2b). The argument of *sladkovatyj* is entailed to have the property of sweetness to a degree that is slightly higher than the minimum.

- (2) a. $\lambda d' \lambda x . \max \{d: \text{sweet}(d)(x)\} > d' \wedge (\max \{d: \text{sweet}(d)(x)\} - d' < d_c)$
 b. $\lambda x . \max \{d: \text{sweet}(d)(x)\} > \min(S_{\text{sweet}}) \wedge (\max \{d: \text{sweet}(d)(x)\} - \min(S_{\text{sweet}}) < d_c)$

We can now account for the contrast between such pairs of adjectives as *čistyj* ‘clean’ and *grjaznyj* ‘dirty’. These adjectives contribute the same upper bound scale, whose upper bound corresponds to absolute cleanliness. Thus, *grijaznovatyj* is predicted to have the meaning in (3):

- (3) $\lambda x . \max \{d: \text{dirty}(d)(x)\} > \min(S_{\text{dirty}}) \wedge (\max \{d: \text{dirty}(d)(x)\} - \min(S_{\text{dirty}}) < d_c)$

The adjective denotes the property of being a little bit dirty, i.e. slightly more dirty than an absolutely clean entity. Analogously, **čistovatyj* is predicted to apply to the same absolute standard (note that $\min(S_{\text{dirty}}) = \max(S_{\text{clean}})$). The resulting meaning is represented in (4):

- (4) $\lambda x . \max \{d: \text{clean}(d)(x)\} > \max(S_{\text{clean}}) \wedge (\max \{d: \text{clean}(d)(x)\} - \max(S_{\text{clean}}) < d_c)$

The adjective is predicted to denote a property of being slightly cleaner than the upper bound of the cleanliness scale. However, this is not possible, since one cannot be any cleaner than maximally clean. That is why the stem *čist-* is incompatible with *-ovat*. More generally, the suffix is compatible with minimum standard adjectives but not with maximal standard ones.

Let us now turn to relative adjectives, which lack an absolute standard. Interestingly, with these adjectives, the suffix applies to the same contextually provided standard as the one associated with *too*. Intuitively, this is the maximal degree that is compatible with the current purpose or desire (Heim 2000). Following Nakanishi (2004), we encode this degree as *C* for the sake of simplicity. To illustrate, the adjective *velikovatyj* (*big+ -ovat*) denotes the property of being slightly too big for a certain goal, i.e. slightly bigger than the maximal value compatible with the contextually provided purpose (e.g. in order to go through a certain door):

- (5) $\lambda x . \max \{d: \text{big}(d)(x)\} > C \wedge (\max \{d: \text{big}(d)(x)\} - C < d_c)$

Finally, let us reconsider such pairs as *dorogovatyj* (*expensive+ -ovat*) / **deše(vo)vatyj* (*cheap+ -ovat*). The meaning of the former is analogous to that of *velikovatyj* (slightly too expensive), whereas **deše(vo)vatyj* is unacceptable. The same pattern is exhibited by numerous pairs of relative adjectives lexicalizing the same scale, as long as one member of the pair conventionally carries a positive connotation and the other member a negative one (e.g. good/bad, strong/weak, thin/fat); *-ovat* is only compatible with the member that carries a negative connotation. Apparently, with these adjectives, the standard *C* is dependent not only on the context but also on convention. It is conventionally determined in what direction an excess can be undesirable. Roughly, ‘more expensive than desirable’ is much more likely than ‘cheaper than desirable’, ‘worse than desirable’ is more likely than ‘better than desirable’, etc. The word *too* can override this tendency and combine with any of the adjectives. However, *-ovat* as a morpheme is more sensitive to lexical and conventional restrictions. It, therefore, does not easily apply to properties, whose degree is unlikely to be higher than desirable.

The proposed analysis allows a unified treatment of the suffix *-ovat*, accounting for its applicability restrictions, and contributes to the investigation of morphemes that function as degree modifiers.