EGO as a cognitive reference point: the case of *невысокий* and *низкий*

ЭГО как когнитивная точка референции: на материале прилагательных *невысокий* и *низкий*

Elena Tribushinina (Елена Сергеевна Трибушинина)

Published online: 3 July 2008

© The Author(s) 2008. This article is published with open access at Springerlink.com

Аннотация Принято считать, что прилагательные размера ориентированы на точку референции в центре градационной шкалы. В настоящей статье исследуется роль ЭГО (размеров человеческого тела) как дополнительной точки референции для интерпретации прилагательных размера. Критическому анализу подвергается гипотеза Е. В. Рахилиной (2000) о том, что ЭГО определяет дистрибуцию прилагательных *невысокий* и *низкий* в русском языке. Хотя результаты корпусного исследования и анкетирования не подтверждают гипотезу в абсолютном смысле, они явно указывают на тенденцию использовать *невысокий* для описания референтов выше человеческого роста, а *низкий*—для характеристики объектов ниже человеческого роста. Результаты также говорят об отсутствии комплементарных семантических отношений между данными прилагательными. Наблюдается значительное совпадение их семантических сфер при сохранении различных фокусных точек. *Невысокий* заимствует у прилагательного *высокий* ориентацию на антропоморфную вертикаль, в то время как его квазисиноним *низкий* ориентирован на вертикаль в самом широком смысле этого слова. Результаты настоящего исследования свидетельствуют о неадекватности общепринятого подхода, согласно которому прилагательные размера имеют только одну точку референции, поскольку этот подход не может объяснить особенности дистрибуции квазисинонимов и семантические различия между ними.

1 Introduction

It is widely assumed that the interpretation of relative adjectives, such as *large*, *loud*, or *bad*, consists in identifying the subject's position on a relevant dimension vis-à-vis a reference

This article is based on a chapter of the author's Ph.D. dissertation, cf. fn. 5. I am very grateful to Theo Janssen and Arie Verhagen for their insightful comments on an earlier draft of this paper. I also wish to thank Anna Ladik, Olga Valko and Irina Zakharova for helping me with the survey. Financial support came from Leiden University Fund and Leiden University Centre for Linguistics.

E. Tribushinina (✉)

Leiden University, Centre for Linguistics, PO Box 9515, 2300RA Leiden, Netherlands
e-mail: E.Tribushinina@let.leidenuniv.nl

point in the middle of the scale. This reference point, usually called norm, is defined as an average value of the property established for a particular comparison class (e.g., Bierwisch 1967, 1989; Katz 1972; Klein 1980; Lehrer and Lehrer 1982; Lyons 1977; Siegel 1980; Arutjunova 1988, 1999). Dimensional terms are usually cited as prime examples of relative adjectives interpreted vis-à-vis a norm (Chafe 1970; Katz 1972; Rips and Turnbull 1980; Poceluevskij 1974). According to this view, a *supra* term (e.g., *big*, *tall*, *long*) is used when an object exceeds the average dimensions of its kind, and sub terms (e.g., *small*, *short*, *narrow*) are employed for smaller-than-average entities.¹

A serious problem in the norm-based approach is that it does not recognise the existence of other reference-point phenomena involved in the processing of adjectival words. According to this line of thought, a giraffe will be dubbed *tall* if it is taller than its average conspecifics. And, conversely, a giraffe that is shorter than average for its comparison class will be called *short*. Suppose, however, that a parent walking with her child in the zoo exclaims:

- (1) Look at the tall giraffe!

As suggested by Yoneoka (1992), the height of the giraffe in (1) is not compared to the average height of giraffes. Rather, it is compared to the size of human beings. In this event, the relevant reference point is not the norm, but the dimensions of the human body. Following Clark (1973), I will call this type of reference point *EGO*. In this paper, I will argue that *EGO* plays a crucial role in anchoring relevant conceptual specifications of vague dimensional adjectives. Consider the following examples from the British National Corpus (BNC):²

- (2) Endill was still recovering from his journey in the basket lift and he followed behind the Headmaster without a word. They walked towards the **tall iron gates** of the school. Endill noticed there was no wall on either side of them and they stood alone in the middle of the grass.
- (3) Meg Shepherd, Hal Shepherd's daughter, was standing in the **tall grass** of the Domain, watching her brother.

It is not inconceivable that the norm is involved in the interpretation of *tall* in (2) and (3). However, it is obviously not the most prominent reference point here. Intuitively, the conceptualizer's height is the more prominent anchor used for assigning dimensional characteristics to the gate and the grass, respectively. In both (2) and (3), the speaker adopts the vantage point of the child, Endill in (2) and Meg in (3). Observe that in (3) a similar effect is achieved by using the preposition *in*, and not *on*: the child is surrounded by the grass, she is submerged in it. Critically, the use of *tall* in (2) and (3) is sanctioned by the interaction of the norm and *EGO*. What is more, the latter reference point is more cognitively salient in these contexts.

Suzuki (1970) goes even further and argues for the overall primacy of, what he calls, an anthropomorphic norm in the semantics of relative adjectives. His line of reasoning is based on the analysis of examples like (4)–(7):

- (4) Ducks have short legs.
- (5) A rabbit has long ears.

¹I borrowed 'sub term' and 'supra term' from Croft and Cruse (2004).

²The examples from the BNC (www.natcorp.ox.ac.uk) were accessed 09-2007.

- (6) ?Men have short necks.
- (7) Some people have short legs.

Suzuki makes the very good observation that the average value for a comparison class specified by the subject is unlikely to be relevant to the use of the adjectives *long* and *short* in sentences (4) and (5), and claims that the measure (reference point) relevant in such cases is the human body, or rather the proportions of the human body. This makes generic judgments about humans exemplified in (6) infelicitous. Dimensional judgments about human body parts are only acceptable if an individual person or a group of people are described vis-à-vis the norm for humans, as in (7).

In a similar vein, Rips and Turnbull (1980) argue that dimensions of the human body are involved in the interpretation of relative adjectives. In a series of experiments, they found that predicatively used relative adjectives were verified faster if they satisfied not only the standard value for a comparison class (norm), but also EGO. For instance, sentences like (8) were verified faster than sentences like (9), even if both referents surpassed the average height of their own class:

- (8) Horses are tall.
- (9) Roses are tall.

The difference between the two sentences is that the referent in (8) is taller than an average animal and taller than a human being, whereas roses in (9) are taller than average flowers, but shorter than humans and objects humans daily deal with.

Another interesting and important study emphasizing the role of EGO in the interpretation of relative adjectives is Raxilina (2000). Raxilina argues that the dimensions of the human body determine the distribution of the near-synonymous Russian adjectives *невысокий* and *низкий*. The former is a morphological negation of the supra term *высокий*; the latter is a morphologically unrelated opposite of *высокий*. According to Raxilina (2000, 135), *низкий* is used when the object is lower than average and smaller than human beings. In contrast, *невысокий* is employed when the entity is low for its comparison class, but as tall as or taller than humans. If Raxilina's hypothesis proves correct, it could offer a very strong support to the claim that EGO is a crucial reference-point phenomenon shaping the semantic make-up of dimensional adjectives. It would also show that the norm used on its own falls short of adequate semantic descriptions, since it is not the only reference point involved in the interpretation of vague relative adjectives.

I will test Raxilina's hypothesis by means of a corpus study and a survey. But before reporting the findings from these two sets of data, it is necessary to discuss some relevant differences between the two near-synonymous terms, which could have implications for their distribution vis-à-vis EGO (Sect. 2). In Sect. 3, I report the results of the corpus study and the survey. In Sect. 4, I compare the findings from this study with the results reported in Taylor (2003) for the English near-synonyms *tall* vs. *high*. In Sect. 5, I reconsider the Russian data in the light of vantage theory. Section 6 summarises the results and presents the conclusions from this study.

2 *Невысокий* vs. *низкий*: some relevant distinctions

2.1 Scale profiling

Apresjan (2004, 635) defines the difference between *невысокий* and *низкий* in terms of degree of deviation from the norm. The former is said to denote properties that only

slightly deviate from the average value, whereas the latter is used to describe referents whose height deviates considerably from the norm in the direction of the absolute zero.

This claim is supported by the intuitions of my informants. All of the twelve speakers I checked with mentioned as the primary difference between *невысокий* and *низкий* the fact that the former denotes objectively bigger values than the latter. For example, the referent of *невысокая трава* was judged as having a greater vertical extent than the referent of *низкая трава*. One of the informants (a linguist) doubted whether a house can be dubbed *низкий*, since it is an intrinsically high object (i.e. always higher than humans) and should rather be called *невысокий*, when falling below the average standard.

In a similar vein, the following example from the Russian National Corpus (RNC)³ clearly demonstrates that a person called *низкий* is smaller than one called *невысокий*:

- (10) Домна Платоновна **росту невысокого**, и даже очень **невысокого**, а скорее совсем **низенькая**, но всем она показывается человеком крупным.

Example (10) clearly shows that the part of the lower subscale denoted by *низкий* extends further in the direction of the absolute zero than the scale part profiled by *невысокий*. Thus, the lower bounds of the two terms do not coincide. The next question that arises in this respect is whether the upper bounds of ‘shortness’ and ‘untallness’ are not coincident either. For instance, it could be the case that *невысокий*, being an explicit negation of *высокий*, can profile not only the lower subscale, but also the mid-zone of the scale where neither *высокий* nor *низкий* can apply. The data available partly support this intuition. On the one hand, *невысокий* can sometimes be semantically specified by *средний*; witness (11). On the other hand, cases like (12) suggest that the domain of *невысокий* does not fully coincide with the zone denoted by *средний*:

- (11) Но сразу хочу предупредить—модель хороша только для людей **невысокого (среднего) роста**. (www.bask.ru/catalog/lma/bags)
- (12) Сказать, что она была **среднего или скорее невысокого роста**, примерно такого же, как я, в меру полная, с покатыми плечами,—значит ничего не сказать: память хоть и способна воспроизвести конкретные реальные черты, но они ничего не добавляют к ее облику, он существует весь разом; ее облик—это она сама. (RNC)

The data presented above show very clearly that *невысокий* and *низкий* profile different, though overlapping, parts of the lower subscale. *Невысокий* covers part of the mid-zone and partly extends into the domain of *низкий*. The domain of *низкий* starts at some point of sufficient deviation from the norm and extends much further than the profile of *невысокий* in the direction of the absolute zero.

These results are fully consonant with the observation often made in the relevant literature that adjectives with the negative prefix *не-* may denote attenuated properties associated with the opposite subscale rather than the absolute opposite of the negated term (Apresjan 1974, 309–312; Vinogradov 1960, 356; Vorotnikov 2000; Raxilina 2000, 134–139; Červenková 1975, 27; Švedova 1970, 212). Thus, *невысокий* does not simply mean ‘low’, instead, it is used to denote the attenuated property—‘rather low’. In a similar vein, *небольшой* denotes bigger sizes than *маленький*, since the former is morphologically associated with *большой* and the latter is used with reference to intrinsically small objects. This also holds for negations of other relative supra terms, such

³ All examples from the RNC (www.ruscorpora.ru) were accessed 04-2007.

as *нестарый*, *небогатый* and *недорогой*. All these words profile part of the mid-zone and partly extend into the domain of the corresponding sub terms *молодой*, *бедный* and *дешевый*. In contrast, negations of sub terms, such as *немолодой*, *небедный* and *недешевый*, cannot denote values in the mid-zone and only profile the upper part of the scale, being emotively loaded counterparts of the corresponding supra terms.

The question that arises in this respect is whether these differences in scale profiling between morphological and lexical opposites have implications for the distribution of *невысокий* and *низкий* vis-à-vis EGO. I will pursue this question in Sect. 3. But before doing so, it is necessary to introduce two further distinctions between the adjectives being studied here.

2.2 Evaluative load

As suggested by Apresjan (2004, 635), Ruzin (1994, 90–91), and Sharoff (2006), *невысокий* involves neither a positive nor a negative evaluation of the object described, whereas *низкий* is often used to include a negative evaluation of the entity. This claim was supported by the intuitions of my Russian informants who judged *невысокий* neutral and *низкий* negative. One of the informants, for instance, commented on the difference between *низкий дом* and *невысокий дом* by indicating that you would never use the former combination when you speak about your own house, unless you hate it. Likewise, another informant said that *низкий дом* is almost a ruin, whereas *невысокий дом* simply does not have a second floor. Compare examples (13) and (14):

- (13) Подходим к заводу. Это ряд обнесенных забором по берегу Волги, как раз против паровозных пристаней, **невысоких зданий**. (RNC)
- (14) Нынешний Александрийский театр, тогда называвшийся Малым, не имел никакой внешней архитектуры: это было **низкое и безобразное здание**, род сарая. (RNC)

Neither a positive nor a negative evaluation is involved in the construal of height in (13). By using the adjective *невысокий*, the writer conceptualizes the height of the buildings in quite an objective, matter-of-fact way. In contrast, the appearance of the building in (14) is conceptualized as something offensive to the eye. By choosing *низкий* rather than *невысокий*, the communicator construes height not simply as being smaller than average, but as deficient and therefore contributing to the negative evaluation of the referent. It is interesting to note that in (14) the negative inferences suggested by *низкий* are confirmed by coordinating it with the adjective *безобразный* expressing a negative evaluation.

2.3 Comparative and superlative forms

Another relevant difference between *низкий* and *невысокий* that has implications for the present study is that *низкий* has both inflectional and periphrastic comparative forms (examples (15) and (16), respectively), whereas *невысокий* can be used only in analytic comparative constructions comprised of *более* and the bare form of the adjective (example (17)):

- (15) Думаю, дома будут постепенно становиться **ниже**. (RNC)
- (16) На **более низких** шинах действительно неудобно ездить, и их можно порекомендовать отъявленным спортсменам. (RNC)

- (17) Привставая на цыпочки, над ней нес зонт юноша—еще **более невысокий**, полный и рыжий, чем я сам. (Lukjanenko 1989, 12f.)

There is an important semantic difference between syntactic and morphological comparatives in Russian. The former are committed, and the latter are impartial (Poceluevskij 1977). Thus, if house A is claimed to be *ниже* than house B, it does not mean that the two houses are per se low: they may both be high, or one of them can be high, or both can be low. In contrast, if house A is called *более низкий* than house B, both houses are, in fact, considered to be low. This difference has implications for the distribution of positive vs. comparative forms of *невысокий* and *низкий*. Since only *низкий* can be used in both impartial (morphological) and committed (syntactic) comparatives, it takes the task over from *невысокий* when it comes to the expression of non-committed comparative relations. For instance, if in the positive form we would normally call a mountain *невысокая* rather than *низкая*, in comparative constructions we would have to resort to *ниже* if we want to claim that one mountain is lower than the other, but not that both of them are low.

Furthermore, both *невысокий* and *низкий* have only committed syntactic superlatives. *Высокий* is different from *низкий* and *невысокий* in that it has both committed and impartial comparative and superlative forms. Given these differences, only positive uses of the three adjectives will be compared in the rest of this paper.

3 Distribution vis-à-vis EGO

3.1 Introductory remarks

We are now in a position to test the hypothesis put forward in Raxilina (2000) that *невысокий* is used to describe entities that are as tall as or taller than humans; and *низкий* is employed for shorter-than-human referents.

To begin with, no single informant I consulted could support this claim explicitly. On the one hand, this is evidence that the distinction between *невысокий* and *низкий* vis-à-vis EGO is not that straightforward. On the other hand, it is also possible that the distinction between the two words with respect to EGO, though essential and psychologically real, is subconscious and therefore cannot be elicited in response to a metalinguistic question. Clearly then, other methods are needed to test the hypothesis. I chose two methods that could shed light on the distribution of *невысокий* and *низкий* vis-à-vis human height—a corpus study and a survey. They will be considered here in turn.

3.2 Corpus study

I started by comparing the use of *невысокий* and *низкий* in the RNC, a corpus of more than 140 million words comprising both written and spoken material. The first thing that catches the eye in the corpus data is a great number of counterexamples to Raxilina's claim. For instance, objects that are intrinsically taller than human beings are frequently dubbed *низкий* (e.g., *дом*—26 uses, *свод*—17, *изба*—16, *гора*—8), and objects that are much smaller than people are often called *невысокий* in the corpus (e.g., *травя*—15 uses, *лоб*—11, *стол*—7, *каблук*—5). Note also that in 56 cases *низкий* is used with reference to human beings, which is again counter to Raxilina (2000). We can therefore conclude that Raxilina's claim is not supported in the absolute sense. It could, however, be that statistical analyses yield tendencies that would be in line with the hypothesis.

Table 1 Distribution of *невысокий* and *низкий* in the RNC vis-à-vis EGO

Adjectives	As tall as or taller than EGO	Shorter than EGO
<i>невысокий</i>	1,300 (87.8%)	181 (12.2%)
<i>низкий</i>	391 (37.5%)	651 (62.5%)

To check whether such tendencies are at work, I classified all dimensional uses of *невысокий* and *низкий* in the RNC into two groups—reference values below the human height and reference values as tall as or taller than humans.⁴ For some head-nouns, like *гора* or *сапоги*, the decision was quite straightforward, since mountains are never lower than humans and jackboots are never higher. However, when the adjectives were used with respect to entities like fences, bushes, or boxes that can be either taller or shorter than humans, broader contexts providing the necessary clues were analysed. Several cases were eliminated from consideration (3 uses of *низкий* and 9 uses of *невысокий*), since it was unclear whether the referents were taller or shorter than humans. This was either for technical reasons (broader contexts for some cases were not provided) or for ontological reasons. In the latter case, the adjectives modified nouns like *забор*, *постамент*, *растение*, and the broader context did not provide enough clues as to whether the referents of these nouns were higher or lower than humans. Only positive forms of the adjectives were analysed for the reasons indicated in Sect. 2.3. The distribution of referents of *невысокий* and *низкий* in the corpus vis-à-vis EGO is presented in Table 1.

As is evident from Table 1, there is a clear tendency to use *невысокий* for referents which are as tall as or taller than human beings (including referents that are human beings). *Низкий*, in its turn, is much more often employed to describe the height of entities that are shorter than people, the difference being highly significant: $\chi^2(1) = 698.9$, $p < 0.001$.

Thus, the results of the corpus study show that there is, indeed, a tendency to use *низкий* for shorter-than-human referents and to resort to *невысокий* to describe referents that are as tall as or taller than human beings, which is in line with Raxilina (2000). Now let us compare these results with the findings from the survey.

3.3 Survey

3.3.1 Method

Participants. A total of 174 undergraduates (69 male and 105 female, age range: 17–35) participated in the experiment. 104 of the students attended Kuzbas Technical University (Kemerovo, Russia); the other 70 subjects attended Kemerovo State Medical Academy (Kemerovo, Russia). They were all monolingual speakers of Russian.

Materials. Two questionnaire tasks were designed to study the distribution of *невысокий* and *низкий* vis-à-vis EGO. These tasks were part of a larger survey investigating the role of various reference points in adjectival semantics.⁵ The two tasks relevant to the distribution vis-à-vis EGO will be discussed in this paper (see Appendix).

⁴For the purposes of the present study, all positional and metaphorical uses were excluded from consideration.

⁵Cf. Tribushinina (2008). *Cognitive reference points: Semantics beyond the prototypes in adjectives of space and colour*. Ph.D. dissertation, submitted to the University of Leiden.

Table 2 Distribution of *невысокий* and *низкий* in the survey vis-à-vis EGO (task 2)

Adjectives	As tall as or taller than EGO	Shorter than EGO
<i>невысокий</i>	531 (62.2%)	323 (37.8%)
<i>низкий</i>	165 (23.2%)	547 (76.8%)

Task 1 was a production test designed to elicit the best referents of *высокий*, *невысокий*, and *низкий*. The results from this part of the survey will be discussed in Sect. 5.

Task 2 was used to investigate whether naïve speakers of Russian show a tendency to choose *невысокий* when it comes to referents that are as tall as or taller than people, and to select *низкий* with respect to objects that are shorter than human beings. In this task, the subjects were offered nine short contexts that clearly indicated whether the entity was shorter, as tall as, or taller than EGO (see Table 3). Three referents were taller than humans (house, mountain, and tree); one was approximately as tall as humans (sideboard); and in five cases the adjectives referred to nouns denoting shorter-than-human objects (fence, grass, flower-pot, bath-house door, and tree-stump). Note that the respondents could construe the height of the referents vis-à-vis EGO either due to intrinsic dimensions of the entity (e.g., mountains are never lower than people) or due to the clues provided by the context (e.g., the fence was so low that we could easily see the neighbours). The subjects were asked to choose which of the two adjectives fit best in each context and to underline it.

3.3.2 Results and discussion

Task 2. The distribution of the two adjectives with respect to EGO in the subjects' responses is shown in Table 2.

The results suggest, in line with the findings from the corpus study, that there is a clear tendency to choose *низкий* when the described entity is shorter than human beings, and to use *невысокий* for referents that are as tall as or taller than human beings. The difference was again highly significant: $\chi^2(1) = 239.2$, $p < 0.001$.

It could also be rewarding to look at the choices for each sentence; see Table 3 (figures indicate the number of responses containing either *невысокий* or *низкий*).

Table 3 suggests that for all but one referent the prediction that entities that are as tall as or taller than humans tend to be described by *невысокий* and shorter-than-human referents by *низкий* holds. The only counterexample is the sentence *Трава у нас в саду невысокая/низкая, сантиметров 10–15*. On the one hand, the fact that the majority of subjects chose *невысокая трава* is surprising, since grass is the shortest of all referents used in this task. What is more, grass is the prototype of 'lowness' in Russian (cf. footnote 5). But, on the other hand, the length of grass was made explicit in the sentence. Probably, the respondents found 15 cm high grass not low, and therefore chose the adjective *невысокий* which, as shown in Sect. 2.1, can denote objectively higher values than *низкий*. One of the respondents even exclaimed during the procedure: "10–15 сантиметров, ничего себе низкая! Это очень даже приличная трава!"

Thus, the analysis of the corpus data and the results of the survey provide converging evidence that there is a strong tendency to use *невысокий* to denote a vertical extent that is equal to or bigger than EGO, and to employ *низкий* to describe the vertical extent of shorter-than-human referents. These results strongly confirmed the hypothesis presented in Raxilina (2000). I would like to emphasise, however, that it is a tendency, rather than an

Table 3 Task 2 of the survey: results per sentence

Sentences	Невысокий		Низкий	
	N	%	N	%
Наш дом невысокий/низкий. В нём всего два этажа.	155	89.1	19	10.9
Забор на нашей даче невысокий/низкий. Нам хорошо видно соседей.	52	29.9	122	70.1
Уральские горы невысокие/низкие, проедешь—и не заметишь.	140	80.5	34	19.5
Трава у нас в саду невысокая/низкая, сантиметров 10–15.	108	62.1	66	37.9
Это была самая обычная комната: невысокий/низкий сервант, журнальный столик посередине, телевизор в углу.	106	60.9	88	39.1
Мы не стали вызывать службу спасения, так как дерево на которое залез котёнок, было невысоким/низким. Папа сам снял Мурзика.	130	74.7	44	25.3
Азалии лучше сажать в невысоком/низком горшке, т.к. корни у них поверхностные.	67	38.5	107	61.5
Дверь в баню—невысокая/низкая, приходится нагибаться при входе.	29	16.7	145	83.3
Машенька села на невысокий/низкий пенек и принялась за пирожок.	67	38.5	107	61.5

absolute distinction. This combinatorial difference is presumably related to the fact that morphological opposites of supra terms usually denote greater reference values than their lexical counterparts (see Sect. 2.1). For this reason, it is more likely that *невысокий* will be used when it comes to the description of very high objects; and, to the human eye, very high objects should, at least, be equal to the height of people. Similarly, objects that are much smaller than humans are considered to be intrinsically low from the viewpoint of a human conceptualizer. Thus, the adjective *низкий*, whose domain comes closer to the absolute zero on the scale of height, is more likely to be used in such cases.

An interesting question that arises in this respect is how we can define the type of semantic relations between the near-synonymous adjectives *невысокий* and *низкий*. In this section, I have shown that they are not in complementary distribution to each other. Rather, they seem to provide two different construals of height originating from two different vantage points. The semantic areas of the two terms overlap considerably. However, each term seems to have its prototypical uses, and the two prototypes do not coincide. These characteristics are symptomatic of co-extension, a type of semantic relations first described by MacLaury (1995) within the framework of vantage theory. Let us now briefly look at the main postulates of vantage theory and the possibilities of its application to dimensional adjectives.

4 Co-extension in the domain of dimensional adjectives

4.1 Vantage theory

Vantage theory is about “the method by which people construct, maintain, and change categories. They do so by coordinating inherently fixed images (or ideas) with inherently

mobile (or changeable) recognitions of similarity and difference of perceived experience to the images” (MacLaury 2003, 285). In this view, categorisation operates by analogy to spatial cognition, which is based on the coordination of fixed landmarks (up-down, left-right, front-back) and mobile coordinates (relative motion). In categorisation, a fixed image functions as a reference point of a category. The perceiver assesses every new experience in terms of similarity to or difference from the fixed reference point. Attention to similarity leads to category expansion; attention to difference, on the contrary, sets boundaries for the category. Attention to similarity and difference are mobile coordinates.

The combination of fixed and mobile coordinates is known as a vantage. Each vantage is constructed in at least two steps. Let us take the category RED as an example. At level 1, focal red serves as a fixed coordinate and attention to similarity with focal red makes the category expand to include a number of similar shades and hues. At level 2, similarity recedes into the background in favour of the new mobile coordinate—attention to difference. Once a new experience is judged as different from the fixed reference point, category expansion stops and category boundaries are set.

MacLaury (1997) arrived at the conclusions that led to the emergence of vantage theory by studying colour categorization in Mesoamerican languages. He used three main procedures: naming, mapping, and focus selection. In the first task, the subjects were asked to name colour chips in the Munsell chart. In the second task, they were asked to put a grain of rice on every colour chip that they thought could be described by a particular colour term. Once the subjects were ready with the task, they were asked to look at the colour chart again and point out any additional colour samples that could eventually be labelled by the colour word. The procedure was repeated until the colour term was mapped on all possible colours. On the third task, the subjects were asked to pick out the best example of the category named by a particular colour term.

By means of the above procedures, MacLaury (1997) singled out three kinds of semantic relations between colour terms—complementation, inclusion, and co-extension. Complementation is a relation characterized by mutual exclusion of two categories (e.g., what is RED is not BLUE). Inclusion brings about lexical hyponymy: the scarlet colour can also be dubbed *red*, but not everything that is red can be called *scarlet*. And, finally, co-extension is a relation between two (or more) colour terms that are available for the same part of the spectrum. These terms are nearly synonymous, but there are also important differences between them. According to MacLaury (1995, 1997), co-extensive terms provide different views on the same category. Put another way, a co-extensive category is claimed to be an arrangement of two vantages. One of them is termed dominant vantage, the other recessive vantage. A word indicating the dominant vantage is called dominant term; a label for the recessive vantage is then recessive term.

The dominant term is more frequent and easily maps on to the whole category. Conversely, the recessive term is less frequent and applies only to a very restricted range of the category. In repeated mapping tasks, subjects, however, agree to gradually extend the recessive range to other category members so that it eventually comes to cover a good deal of the dominant vantage. What is also very interesting is that the two terms have different foci: the focus of the dominant term is located near the centre of the category, whereas the focus of the recessive term is skewed towards the periphery. The dominant range is more or less evenly distributed, and the recessive range has a restricted distribution skewed towards the margin.

The major difference between the two vantages is the relative salience of one mobile coordinate over the other. The dominant term is associated with emphasis on similarity, due to which it easily covers the whole category. The recessive term, on the contrary,

Table 4 Referent categories of *tall* in the BNC

Referent categories	Examples	Tokens	%
Human beings	child, man, girl, woman	3,096	62.66
Vegetation	bush, flowers, grass, plant, trees	569	11.52
Constructions	bell-tower, building, dome, house	477	9.65
Containers	bottle, box, glass, jug	103	2.08
Animals	bird, bull, dog, horse, rhinoceros	97	1.96
Furniture and appliances	bookcase, chair, refrigerator, stool	90	1.82
Openings	door, entrance, portal, window	83	1.68
Vehicles	car, caravan, mast, ship	63	1.28
Eminences	cliff, hill, pinnacle, mountain	55	1.11
Supports	base, buttress, leg, stem	46	0.95
Enclosures	fence, gates, hedge, partitions	43	0.87
Clothing	hat, helmet, collar	38	0.77
Monuments	obelisk, sculpture, statue	26	0.53
Interior	apartment, gallery, room	22	0.45
Body parts	head, limb, thigh	10	0.2
Other	book, candle, cane	122	2.47

is associated with emphasis on difference and therefore includes only a limited range of colours. People are very flexible in adopting one or another vantage point on the category. Sometimes they focus on similarity with the dominant focus, and on other occasions the same stimuli are estimated in terms of difference from the dominant reference point. This precludes the two terms from complementary distribution.

Although vantage theory came into existence with studies in the domain of colour categorisation, in the past few years it has acquired a number of applications in other areas of linguistic research. For instance, Taylor (2003) applied the findings reported in MacLaury (1995, 1997) to the analysis of the nearly synonymous English dimensional adjectives *high* and *tall*. I will now turn to the main findings reported in Taylor (2003), for they could shed more light on the semantic relations between the Russian adjectives *невысокий* and *низкий*.

4.2 Application to dimensional adjectives: the case of *tall* vs. *high*

It has been suggested on numerous occasions that *tall* and *high* are in complementary distribution, i.e. *tall* combines with nouns that are incompatible with *high*. To be more exact, *tall* is claimed to be felicitous with nouns denoting human referents, whereas *high*, it is argued, cannot be used with reference to human beings at all (e.g., Durrell 1988; Sharoff 2006). However, a very simple corpus search immediately provides many counterexamples. To begin with, *tall* appears to be frequently used for non-human referents. Witness Table 4 indicating the distribution of referent categories of *tall* in the BNC.

High, in its turn, is sometimes used with reference to human beings, as in (18)–(20):

- (18) She stood—hung—five feet four inches **high**. Too short to have killed herself.
(BNC)

- (19) Five **feet high** and weighing one hundred and seventy pounds, a veritable Humpty Dumpty of a woman, Mrs Stych had no hope of ever being able to wear pants gracefully. (BNC)
- (20) Mm. and she rang up and said that she wanted to go and would I go with her? And I said yes, you see. Of course, the woman said why do you come? So I says, well I've come for Chris really. So she said, oh they all say that! And she made me feel about two **inches high**. (BNC)

Note that the human referents in the above examples are often conceptualized as non-living and/or non-human objects—a corpse in (18), Humpty-Dumpty in (19), and a humiliated person in (20). Taylor (2003) argues that *high* is used with reference to human stature when humans view their own height in objective terms, just like they would describe the height of a hill or a wardrobe. Thus, using *high* instead of *tall* is a special case of objectification (Langacker 1985, 1987, 1990).

Tall, so the argument goes, is employed when the entities are not necessarily high in objective terms. Rather, they are seen as being tall. In answering the question what it means to see something as tall, Taylor (2003) uses the results of the study reported in Dirven and Taylor (1988). They investigated the distribution of referent categories for *tall* in the Birmingham University Corpus (7.3 million words) and used a questionnaire eliciting acceptability judgments of *tall* with 67 different head-nouns. The results from both sets of data—the corpus and the survey—were fairly uniform. By far, the most frequent and perfectly acceptable referents of *tall* were human beings, followed by trees, plants, buildings, and a few other minor categories. These results were replicated in Taylor (2003), where humans followed by vegetation and buildings were shown to be the most frequent referents of *tall* in the LOB (Lancaster-Oslo/Bergen) corpus. The results from Dirven and Taylor (1988) and Taylor (2003) are fully consonant with the data from the BNC presented in Table 4.

Dirven and Taylor (1988) interpret these results in the following way. Non-human objects can be dubbed *tall* if they possess some crucial properties of human verticality, including prominence of the vertical dimension, dynamic conceptualization of the vertical extent, and standing out from the background. Indeed, these properties can very well explain why *tall* is perfectly felicitous with nouns denoting buildings and vegetation. Just like human beings, these objects are individuated as *gestalts* discontinuous from the background; they grow upwards either by natural growth (vegetation) or through human activity (buildings); and their vertical dimension is the maximal one (cf. Vogel 2004). Notice that these properties are not necessary-and-sufficient spatial features constituting an object schema in the sense of Bierwisch (1967, 1989) and Lang (1989). Rather, objects that are dubbed *tall* are “thought of as tall” (Taylor 2003, 271). Thus, *tall* and *high* present alternative construals of vertical extent.

Taylor (2003) builds on the findings reported in Dirven and Taylor (1988) and reconsiders them in light of vantage theory. He claims that *tall* and *high* provide two views on the category VERTICAL EXTENT (see also MacLaury 2003). *High* presents the dominant vantage. Since this vantage is characterised by emphasis on similarity, the term is more frequent, it applies to a wide range of entities (including human beings), and is more or less evenly distributed over different referent categories. What is more, focus on similarity results in a broad network of senses, not only dimensional, but also positional and metaphorical ones.

Tall, in its turn, names the recessive vantage with the emphasis on difference from the fixed landmark. *Tall* offers a very specific view on the category VERTICAL EXTENT. It is

less frequent and exhibits a skewed distribution of referents, “with pronounced emphasis on humans and preference for the animate” (MacLaury 2003, 287). Human height (i.e. a very specific sort of verticality) is a fixed reference point of this vantage. For this reason, *tall* is also frequently used with reference to vegetation and buildings, i.e. entities that share a number of relevant spatial properties with EGO. Because of the orientation to a very specific (human-like) kind of verticality and emphasis on difference, *tall* has no positional uses and very few metaphorical extensions.

To summarise, according to this view, *tall* and *high* name two vantages on the same category. They have different fixed reference points (vertical extent vs. human height) and different mobile reference points (difference vs. similarity). The dominant status of *high* renders it applicable to a greater range of referents, including human beings. In contrast, the recessive vantage labelled *tall* is centred around a very specific kind of verticality, the one associated with human bodies. Entities dubbed *tall* are therefore seen as exhibiting the properties intrinsic to the verticality of EGO.

5 Низкий and невысокий revisited

5.1 Introductory remarks

In view of the findings reported in Taylor (2003) and Dirven and Taylor (1988), it would be interesting to look once again at the distribution of *невысокий* and *низкий* in the corpus and in the survey. As indicated in Sect. 3, *невысокий* and *низкий*, like *high* and *tall*, are co-extensive, since their domains on the scale of height overlap considerably and, what is more, they can be used with reference to the same types of entities. To estimate the degree of overlap, I categorised the referents of *невысокий* and *низкий* in the RNC, the way Dirven and Taylor (1988), Taylor (2003), and I myself (Table 4) did it for *tall*. After that, I compared the results of the corpus study with the findings from task 1 of the survey. In this task, the subjects were asked to give three nouns that combine particularly well with a number of adjectives, including *высокий*, and either *невысокий* or *низкий*.⁶ Two versions of the survey were made—one with *невысокий* in task 1 and one with *низкий*—in order to avoid priming. The task also contained nine distractors (see Appendix). In total, 87 subjects filled in version 1, and 87 subjects version 2 of the questionnaire. The results of the two studies—analysis of referent categories in the RNC and task 1 of the survey—will be discussed in the remainder of this paper.

5.2 Высокий in the corpus and in the survey

Since *невысокий* is a derived term, morphologically related to its positive counterpart *высокий*, it might be rewarding to start by looking at the referents of *высокий* in the corpus and in the survey. The distribution of referent categories of *высокий* in the RNC is presented in Table 5. 14 cases out of 5,633 relevant uses were eliminated from consideration in this analysis, since for technical or ontological reasons it was impossible to determine whether the referents in these cases were taller or shorter than human beings. Referent categories elicited in the survey are given in Table 6.

As suggested by Tables 5 and 6, humans are by far the most frequent referent category in the corpus (37.2%) and one of the two most frequent categories elicited by means of the

⁶I borrowed this method from Weydt and Schlieben-Lange (1998).

Table 5 Referents of *высокий* in the RNC

Referent categories	Examples	Tokens	%
Human beings	девушка, парень, фигура, человек	2,093	37.2
Vegetation	береза, дерево, куст, трава, цветы	645	11.5
Constructions	башня, дом, здание, крыльцо	641	11.4
Clothing	воротник, каблук, сапоги, шапка, шляпа	481	8.5
Eminences	бугор, гора, холм, скала	416	7.4
Furniture and appliances	кресло, кровать, спинка (стула, кровати)	287	5.1
Enclosures	борт, забор, ограда, плотина, частокол	266	4.7
Body parts	грудь, лоб, прическа, шея	221	3.9
Openings	вход, дверь, окно, расщелина	96	1.7
Containers	бокал, корзина, кружка, стакан, сундук	94	1.67
Supports	ножка, подсвечник, столб, фундамент	92	1.63
Vehicles	автомобиль, колеса, телега, трактор	82	1.5
Interior	зал, кабинет, комната, палаты	66	1.2
Monuments	памятник, пьедестал, постамент	19	0.34
Animals	жираф, лошадь, слон, собака	18	0.32
Other	буква, стопка, фонарь, шест	116	2.1

survey (28.6%). The findings from the two sets of data also suggest that *его* is relevant to the distribution of *высокий* in two different ways. Firstly, the most frequent referent categories besides human beings—vegetation and constructions—share relevant features of human verticality, including salience of the vertical dimension, dynamic growth, and standing out from the background (Dirven and Taylor 1988; Taylor 2003). Secondly, the majority of referents are as tall as or taller than human beings (93% in the survey and 74% in the corpus).

5.3 *Невысокий* and *низкий* in the corpus and in the survey

Now, let us consider the results for *невысокий* and *низкий* provided by the corpus study and elicited by the survey. I will consider the findings regarding these two adjectives in separate subsections.

5.3.1 *Невысокий*

The distribution of referent categories of *невысокий* in the RNC is presented in Table 7. It is noteworthy that *невысокий* is similar to its source word *высокий* in that the most frequent referent category by far in the corpus are human beings (54.6%). What is more, three of the four most frequent referent categories after human beings are also the same for *невысокий* and *высокий* (vegetation, constructions, eminences), though represented in a slightly different order.

At the same time, there are two obvious differences between the distribution of referent categories of *высокий* and *невысокий* in the corpus. Firstly, humans are even more frequent referents of *невысокий* as compared to *высокий*. This can be explained by the fact that *высокий* is the only adjective denoting bigger-than-average vertical extent, whereas the smaller subscale can be named by two co-extensive terms. One of these sub terms—*невысокий*—obviously has human referents as its specialty. *Низкий*, in its turn, seems

Table 6 Referents of *высокий* in the survey

Referent categories	Examples	Tokens	%
Constructions	башня, дом, лестница, мост, стена	123	30.1
Human beings	девушка, парень, человек	117	28.6
Vegetation	береза, дерево, дуб, кипарис, трава	90	22
Eminences	водопад, гора, пик, скала, холм	36	8.8
Supports	пень, столб	16	3.9
Enclosures	забор, ограда, ограждение	12	2.9
Furniture and appliances	мебель, стенка, стол, стул	5	1.2
Animals	животное, слон	3	0.7
Body parts	лоб, нога	2	0.5
Vehicles	мачта	2	0.5
Clothing	каблук	1	0.2
Openings	–	0	0
Containers	–	0	0
Monuments	–	0	0
Interior	–	0	0
Other	буква, светофор	2	0.5

Table 7 Referents of *невысокий* in the RNC

Referent categories	Examples	Tokens	%
Human beings	девушка, крепыш, мужчина, ребенок	814	54.6
Eminences	гора, скала, склон, холм, хребет	176	11.8
Constructions	баня, дом, стена, церковь	140	9.4
Vegetation	дерево, куст, кустарник, трава	119	8.0
Enclosures	забор, ограда, плетень, штакетник	99	6.6
Supports	ножки, столб, цоколь	33	2.2
Furniture and appliances	диван, прилавок, стол, табурет	28	1.9
Interior	зал, комната, помещение	19	1.3
Clothing	ботинки, каблук, сапоги	18	1.2
Body parts	лицо, лоб	12	0.8
Monuments	обелиск, памятник, постамент	11	0.7
Containers	бидон, бочка, ванна, котелок	9	0.6
Animals	конь, лошадь	7	0.5
Opening	вход	1	0.1
Vehicles	мачта	1	0.1
Other	ворс, свечка	3	0.2

to take over some other referent categories, like pieces of furniture (cf. Raxilina 2000, 135). The proportion of human referents for *высокий* is smaller, since when it comes to the designation of the upper subscale, *высокий* covers referents of both *невысокий* and *низкий* (note, for instance, the higher percentages for *высокий* as compared to *невысокий* with regard to the category FURNITURE AND APPLIANCES).

Table 8 Referents of *невысокий* in the survey

Referent categories	Examples	Tokens	%
Human beings	девушка, мужчина, парень, человек	67	33.5
Constructions	башня, дом, здание, лестница	52	26
Vegetation	береза, дерево, дуб, куст, трава	42	21
Eminences	гора, холм	12	6
Enclosures	забор, ограда, преграда	9	4.5
Furniture and appliances	скамейка, стол, стул, тумбочка	6	3
Supports	столб	3	1.5
Animals	жираф, конь	2	1
Clothing	каблук	2	1
Openings	дверь	2	1
Body parts	лоб	1	0.5
Monuments	скульптура	1	0.5
Interior	–	0	0
Vehicles	–	0	0
Containers	–	0	0
Other	объект	1	0.5

Secondly, eminences (mountains, hills, waterfalls) are the second most frequent group for *невысокий*, and only the fifth for *высокий*. This difference can be accounted for by the fact that natural elevations are prototypically high entities. Therefore, modification by *высокий* is, in a sense, redundant for this category. Conversely, it is not redundant to use *невысокий* with reference to these prototypically high entities, if their height incidentally falls short of some expected standard. Note also that on the elicitation test, the frequency of this referent category for *высокий* was somewhat higher than in the corpus (8.8% vs. 7.4%). Similar results were reported by Vogel (2004). She noticed that entities known as prototypes of tallness were more frequently elicited by the questionnaire than attested in the corpus. This is evidence that objects considered to be prototypically high/tall are less likely to be dubbed ‘high’ due to the redundancy of this modification.

Now, we can compare the results of the corpus study with the referents elicited by means of the survey. As shown in Table 8, the four most frequent referent categories elicited for *невысокий* (humans, eminences, constructions, and vegetation) are the same as the referent categories of this adjective attested in the RNC, though ordered in a slightly different way. And, what is even more interesting, the same four types of referents were elicited for *высокий* (constructions, humans, vegetation, and eminences). These findings clearly indicate that *невысокий* inherits its best referents from *высокий*.

Furthermore, given the overall frequency of human referents, *невысокий* probably also inherits the orientation of *высокий* to ego. One manifestation of orientation to human-like verticality is that more than a half of all uses of *невысокий* in the corpus and 28.6% of the referents elicited by the survey are descriptions of human height (note that in 68% of these cases human referents were given as a first choice, i.e. elicited under *a*). Secondly, category expansion proceeds along the lines indicated by Dirven and Taylor (1988) for *tall*, in the sense that the most frequent referent categories after human beings—vegetation and buildings—possess the basic properties of human-like verticality, namely dynamic growth, prominence of the vertical dimension, and standing out from the background.

Table 9 Referents of *невысокий* as tall as or taller than EGO

Categories	Corpus	Survey
Human beings	100	100
Eminences	91	100
Constructions	91	100
Vegetation	63	76

Table 10 Referents of *низкий* in the RNC

Referent categories	Examples	Tokens	%
Furniture and appliances	диван, кресло, кровать, стол	262	25.1
Constructions	дом, изба, свод, флигель	198	18.9
Vegetation	дерево, куст, растение, трава	110	10.5
Enclosures	бордюр, забор, ограда, штaketник	93	8.9
Interior	зал, комната, помещение	85	8.1
Body parts	затылок, лицо, лоб, шея	64	6.1
Human beings	старушка, человек	56	5.4
Openings	вход, дверь, окно, проем	55	5.3
Eminences	гора, мыс, холм	32	3.1
Clothing	каблук, сапоги, туфли, шляпа	27	2.6
Vehicles	баржа, машина, судно, танк, телега	22	2.1
Containers	кадка, тарелка, цветочница, ящик	17	1.6
Supports	ножки, опора, платформа	13	1.2
Animals	кляча, лисица	2	0.2
Monuments	–	0	0
Other	буква, крест, пружина	9	0.9

Thirdly, there is a considerable homogeneity among the most prominent referent types of *невысокий* both in the corpus and in the survey as to the height vis-à-vis EGO. In other words, the four most frequent referent categories of *невысокий* are predominantly constituted by entities that are as tall as or taller than human beings. Table 9 presents the frequencies of referents that are as tall as or taller than human beings for the four most frequent referent categories in the corpus and in the survey (figures indicate percentages).

As is evident from Table 9, the vast majority of entities constituting the four prominent referent categories of *невысокий* in the corpus and in the survey are as tall as or taller than human beings. In the next subsection, I will show that this homogeneity exhibited by the referents of *невысокий* vis-à-vis human height is crucial to the distinction between *невысокий* and its near-synonym *низкий*.

5.3.2 Низкий

The distribution of referent categories of *низкий* in the corpus is presented in Table 10. Notice that the most frequently occurring referents of *низкий* in the RNC are pieces of furniture and appliances. This category is at the same time one of the infrequent groups for both *высокий* and *невысокий*. This finding supports Raxilina's observation that *низкий* is

Table 11 Referents of *низкий* in the survey

Referent categories	Examples	Tokens	%
Human beings	девушка, ребенок, человек	50	33.5
Vegetation	ель, дерево, куст, лес, трава	30	20.1
Furniture and appliances	кровать, скамейка, стол, стул, табурет	27	18.1
Constructions	дом, лестница, мост, здание	22	14.8
Enclosures	забор	8	5.4
Supports	пенек, столб	3	2
Openings	дверь, проход	3	2
Eminences	холм	2	1.3
Clothing	каблук	1	0.7
Animals	кошка	1	0.7
Interior	подвал	1	0.7
Vehicles	автомобиль	1	0.7
Containers	–	0	0
Monuments	–	0	0
Body parts	–	0	0

Table 12 Head-nouns of *низкий* denoting human beings (survey, task 1)

Nouns	Frequency
человек	23
рост	22
девушка	1
карлик	1
мальчик	1
ребенок	1
тетя	1

more likely than the other adjectives to profile the vertical position of the functional top, rather than the vertical extent as such (Raxilina 2000, 135). It is also remarkable that only in 5.4% of the cases *низкий* is used with reference to human beings, this category being one of the minor groups along with openings, eminences, clothing, vehicles, containers, and supports.

Now, compare the results from the corpus study with the referents elicited by means of the survey in Table 11.

In view of the corpus data, the finding that strikes us most in the survey is that by far the most frequent referent category of *низкий* elicited in task 1 is human beings, the category that was one of the most infrequent in the corpus. On closer scrutiny, we notice that in almost half of the cases the elicited noun in this category was *человек*. See Table 12 (frequencies are absolute numbers).

The problem with the adjective-noun-combination *низкий человек* is that it can refer both to height and, metaphorically, to indecency. It is, then, difficult to interpret the results as to whether the subjects meant the dimensional or the metaphorical sense of this phrase. My own intuition was that *низкий человек* is more likely to be used metaphorically than

Table 13 Interpretations of *низкий человек*

Meanings	Frequency
metaphorical	52.1
dimensional	18.8
1. dimensional; 2. metaphorical	18.8
1. metaphorical; 2. dimensional	10.4

to describe the vertical dimension of a human being. In the latter case, you would probably use a combination *человек низкого роста* or a diminutive form of *низкий* – *низенький*.

A pilot study with Russian speaking informants did not clarify the results. About half of the informants said that *низкий человек* can mean only that a person is indecent; others insisted that the expression meant ‘a person of short stature’.

To get more precise results, I conducted a small follow-up study examining the distribution of interpretations of the phrase *низкий человек*. The subjects—48 undergraduates of the Faculty of Romance and Germanic Linguistics at Kemerovo State University (42 female and 6 male, age range: 17–26)—were asked to define in writing the meaning of the phrase *низкий человек*, mentioning the most prominent reading, if there were more than one, in the first place. The results of this study are presented in Table 13 (frequencies indicate percentages).

Table 13 shows that more than a half of the respondents came up solely with the metaphorical interpretation of the phrase. In addition, another 10.4% of the subjects indicated that the metaphorical interpretation, though not the only one, is more salient than the dimensional reading. Although a number of subjects understood the expression exclusively or primarily in the dimensional sense, these responses were far less frequent than the metaphorical interpretations elicited from the subjects. Thus, the experimental hypothesis that the adjective-noun-combination *низкий человек* is more likely to be used metaphorically than literally received strong support.

Therefore, it is very plausible to think that the high frequency of human referents elicited in task 1 of the survey was due to the mixture of metaphorical and dimensional uses. Thus, when it comes to dimensional uses only, we can probably reduce the frequency of the human referents provided by the respondents of the survey, at least, by half. This result is consistent with the results of the corpus study. Note that the low frequency of human referents in the corpus was primarily motivated by the fact that for the purposes of the present study all metaphorical uses of *низкий* were excluded from consideration.

Another important finding is the relative heterogeneity of the referents of *низкий* as compared to *невысокий*. For instance, both in the corpus and in the survey, *низкий* exhibits a more even distribution of referent categories (note the greater number of groups with similar percentages). This is different from *невысокий* where humans constitute more than a half of all referents in the corpus and are also the most frequent group elicited in the survey. For *низкий*, we do not see such an obviously predominant group, after the high frequency of human referents in the survey was discarded as a combination of different readings. There is also less uniformity, as compared to *невысокий*, with respect to the distribution of reference values vis-à-vis EGO. As explained in Sect. 5.3.1, the most prominent referent categories of *невысокий* are almost exclusively as tall as or taller than human beings (see Table 9). The most frequent referents of *низкий* in the corpus and in the survey are a lot more versatile in this sense, see Table 14 (the figures indicate percentages of referents that are shorter than EGO).

Table 14 Referents of *низкий* shorter than EGO

Categories	Corpus	Survey
Furniture and appliances	100	100
Constructions	4	9
Vegetation	83	53

Table 14 shows that in the case of *низкий*, there is greater variation between the three most prominent referent categories as to whether the referents constituting these categories are taller or shorter than EGO. Thus, the pieces of furniture dubbed *низкий* in the RNC and in the survey are all shorter than humans. The vast majority of the constructions are taller than EGO. And the referents constituting the category VEGETATION display even within-category variation as to the height vis-à-vis EGO, in the sense that the majority of referents in the corpus are shorter than humans, whereas in the survey, it is only a half of all elicited referents. Thus, *невысокий* is more uniform in its combinability with nouns denoting entities co-extensive with or taller than human beings, whereas *низкий* displays more variation in this respect.

5.4 Discussion

In light of the present data and inspired by the results reported in Taylor (2003), I would like to suggest that *невысокий* and *низкий* present two views on the lower subscale of height. *Низкий* is the term for the dominant vantage. It has a higher overall frequency (about 12,000), including numerous positional uses and metaphorical extensions (cf. *high*, Sect. 4.2). It does not seem to profile any specific kind of verticality and is therefore applicable to a broad range of referents, including human beings and very high entities (constructions, for instance, are the second most frequent referent category in the corpus and the fourth in the survey).

In contrast, *невысокий* is the term for the recessive vantage, having human verticality as a fixed reference point. Thus, by far the largest group of its referents in the RNC and in the survey are human beings. Entities that share relevant spatial properties with human beings and entities co-extensive with or taller than human beings are much more likely to be dubbed *невысокий* than other topological types of referents. Due to emphasis on the difference typical of recessive vantages, this adjective has a much lower overall frequency than *низкий* (about 2,000). Positional uses and metaphorical extensions are also less frequent (cf. *tall*, Sect. 4.2). For instance, positional uses of *низкий* in the survey constituted 13% of all the answers; extended uses were elicited in 34% of cases. Note that for *невысокий*, the figures are 4% and 18%, respectively. This difference was also attested in the RNC.

In view of the remarkable overlap between the prominent referent categories of *высокий* and *невысокий* and given the orientation of both adjectives to EGO (see Sect. 5.2), it is plausible to think that *невысокий* inherits its orientation to human height from *высокий*, the term it is morphologically derived from. Put another way, the results strongly suggest that nouns denoting entities that we normally think of as being intrinsically tall, like human beings, trees, and buildings, are the best candidates for modification by *невысокий*, in case their actual height incidentally falls below the expected value. Conversely, entities that are usually lower than human height are less likely to be called *высокий*, and, as a consequence, also less likely to be dubbed *невысокий*. The entities of the latter kind are, as it were, intrinsically low and are therefore much more felicitous with *низкий*.

In more general terms, it can be concluded that morphologically related opposites, though reversing the scale associated with their source-term (Verhagen 2005), are very likely to borrow its salient reference-points and restrictions on combinability. Conversely, morphologically unrelated opposites have their own salient reference points (bottom/ground for *низкий*) and construe the property on the lower subscale as intrinsic to the referent of their head noun. This explains why morphological opposites denote more attenuated properties than lexical opposites of supra terms (see Sect. 2.1).

The findings reported above could also suggest that the vertical dimension, by virtue of being primary and canonical for human beings, receives overall primacy even if the described entities are non-human. This prediction receives psycholinguistic support from the study reported in Moreno et al. (1999), which has shown that the vertical dimension usually dominates other extensions in adult language. It is always mentioned first and adults make significantly fewer mistakes with this dimension than with LENGTH, WIDTH, THICKNESS, and DEPTH.

This prediction is also supported by developmental studies suggesting that children between 3 and 5 years of age use the adjectives *big* and *little* for objects with the greatest vertical extent, i.e. they interpret *big* as ‘tall’ and *little* as ‘short’ (Coley and Gelman 1989; Lumsden and Poteat 1968; Maratsos 1973, 1974; Ravn and Gelman 1984). For instance, Lumsden and Poteat (1968) found that five- and six-year-old children tend to choose the taller object as the bigger one, even if the surface area of the shorter object is noticeably larger.

In a similar fashion, in the experiment reported in Ravn and Gelman (1984), the subjects eagerly labelled objects having different height and equal width as *big* and *little*, but refused to do so when the direction of difference was horizontal rather than vertical. Put another way, children are reluctant to call two objects *big* and *little*, respectively, when they have equal height and only differ in width or some other non-vertical dimension.

Coley and Gelman (1989) replicated the results reported in Maratsos (1973) and Ravn and Gelman (1984). Furthermore, they found that two factors—object orientation and object type—have clear effects on the consistency of making judgments about ‘bigness’ on the basis of the vertical extent. Thus, the subjects were more likely to rely on height when the objects were positioned vertically, than when they were in a horizontal position. And, what is more interesting for the present discussion, three-year-olds relied on the vertical extent more often when judging the size of people than of brownies and rectangles. This result suggests that the primacy of the vertical extent in our spatial cognition is likely to be motivated by the fact that human beings are canonically vertical entities (cf. Clark 1973; Johnson 1987; Lakoff 1987). Put another way, we probably associate canonical verticality primarily with the architecture of the human body.

Furthermore, in child-directed speech, maturation is often presented as ‘getting big’, so that growing tall and becoming mature (= big) are closely related concepts (Maratsos 1973). This renders non-human (but human-like!) dynamically growing entities, like trees and buildings, good candidates for modification by adjectives like *tall*, *высокий*, and *невысокий* (by virtue of reference-point projection from *высокий*).

6 Conclusion

This paper has explored the role of EGO as a cognitive reference point for producing and interpreting utterances with dimensional adjectives. I hope to have demonstrated that the analysis of relative adjectives exclusively in terms of norms and comparison classes is

not flexible enough to account for the relevant semantic properties of these words and the semantic differences between them.

A case study reported in this paper has demonstrated that another reference point—EGO—is crucial to explaining the differences between the nearly synonymous adjectives *невысокий* and *низкий*. Following Taylor (2003), I have suggested that *невысокий* and *низкий*, like *high* and *tall*, are co-extensive rather than complementary. One of the terms in these pairs—*high* and *низкий*—is the term for the dominant vantage. The dominant terms construe vertical extent in objective terms as intrinsic ‘highness’ and ‘lowness’, respectively. They are more frequent and quite equally distributed across different referent categories (including human beings) due to emphasis on the similarity characteristic of the dominant vantage. Emphasis on similarity also gives rise to many positional and metaphorical uses of these words.

The terms for the recessive vantage—*tall* and *невысокий*—construe verticality in a very specific, human-like way. In other words, the fixed reference-point of this vantage is the vertical extent of the kind exhibited in human beings. These terms are less frequent; they are quite resistant to extended uses, and have either no (in the case of *tall*) or very few (in the case of *невысокий*) positional uses. The recessive vantage has a skewed distribution, in the sense that the vast majority of referents of *tall* and *невысокий* are human beings. Vantage expansion proceeds along the lines of spatial similarity with EGO, i.e. nouns denoting entities that, like humans, grow upwards, have support on the ground, and stand out from the background by virtue of their vertical dimension are particularly good candidates for modification by *tall* and *невысокий*.

The difference between the two recessive terms considered here is that *tall* is morphologically simple and *невысокий* is morphologically related to its supra counterpart *высокий*. The corpus data and the results of the survey suggest that *невысокий* inherits its orientation to EGO from *высокий* (cf. Raxilina 2000). These findings offer strong support for the hypothesis that people associate the vertical dimension primarily with the architecture of their bodies, which renders verticality a primary spatial dimension in our anthropocentric worldview.

Open Access This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.

Appendix

1. Пожалуйста, назовите по три существительных, которые, по Вашему мнению, лучше всего сочетаются с приведенными ниже прилагательными. Обратите внимание, что Вы можете использовать существительные не только мужского, но также женского и среднего рода.

Пример:

Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *зелёный* (-ая, -ое):

- а) *трава* б) *ёлка* в) *крокодил*

- 1A. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *далёкий* (-ая, -ое):

- а) б) в)

- 1Б. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *высокий* (-ая, -ое):
а) б) в)
- 1В. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *интересный* (-ая, -ое):
а) б) в)
- 1Г. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *сладкий* (-ая, -ое):
а) б) в)
- 1Д. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *красивый* (-ая, -ое):
а) б) в)
- 1Е. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *чистый* (-ая, -ое):
а) б) в)
- 1Ж. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *красный* (-ая, -ое):
а) б) в)
- 1З. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *добрый* (-ая, -ое):
а) б) в)
- 1И. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *трудный* (-ая, -ое):
а) б) в)
- 1К. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *пустой* (-ая, -ое):
а) б) в)
- 1Л. Назовите три существительных, которые, по Вашему мнению, особенно хорошо сочетаются с прилагательным *низкий* (-ая, -ое) / *невысокий* (-ая, -ое):
а) б) в)
2. Пожалуйста, выберите прилагательное, которое, с Вашей точки зрения, лучше всего подходит в следующих контекстах. Подчеркните его.
- 2А. Наш дом **невысокий/низкий**. В нём всего два этажа.
- 2Б. Забор на нашей даче **невысокий/низкий**. Нам хорошо видно соседей.
- 2В. Уральские горы **невысокие/низкие**, проедешь—и не заметишь.
- 2Г. Трава у нас в саду **невысокая/низкая**, сантиметров 10–15.
- 2Д. Это была самая обычная комната: **невысокий/низкий** сервант, журнальный столик посередине, телевизор в углу.
- 2Е. Мы не стали вызывать службу спасения, так как дерево на которое залез котёнок, было **невысоким/низким**. Папа сам снял Мурзика.

- 2Ж. Азалии лучше сажать в **невысоком/низком** горшке, т.к. корни у них поверхностные.
23. Дверь в баню—**невысокая/низкая**, приходится нагибаться при входе.
- 2И. Машенька села на **невысокий/низкий** пенек и принялась за пирожок.

References

- Apresjan, Ju. D. (1974). *Leksičeskaja semantika. Sinonimičeskie sredstva jazyka*. Moskva.
- Apresjan, Ju. D. (2004). *Novyj ob'jasnitel'nyj slovar' sinonimov russkogo jazyka*. Moskva.
- Arutjunova, N. D. (1988). *Tipy jazykovyx značenij. Ocenka. Sobytie. Fakt*. Moskva.
- Arutjunova, N. D. (1999). *Jazyk i mir čeloveka*. Moskva.
- Bierwisch, M. (1967). Some semantic universals of German adjectivals. *Foundations of Language*, 3, 1–36.
- Bierwisch, M. (1989). The semantics of gradation. In M. Bierwisch & E. Lang (Eds.), *Dimensional adjectives. Grammatical structure and conceptual interpretation* (pp. 71–261). Berlin.
- Červenková, I. (1975). O pokazateljax mery priznaka (na materijale sovremennogo russkogo literaturnogo jazyka). *Godišnik na Sofijskija Universitet, Fakultet po Slavjanski Filologii*, 68(1), 1974, 7–111.
- Chafe, W. L. (1970). *Meaning and the structure of language*. Chicago.
- Clark, H. H. (1973). Space, time, semantics, and the child. In T. E. Moore (Ed.), *Cognitive development and the acquisition of language* (pp. 27–63). New York, London.
- Coley, J. D., & Gelman, S. A. (1989). The effects of object orientation and object type on children's interpretation of the word *big*. *Child Development*, 60, 372–380.
- Croft, W., & Cruse, D. A. (2004). *Cognitive linguistics*. Cambridge.
- Dirven, R., & Taylor, J. R. (1988). The conceptualisation of vertical space in English: The case of *tall*. In B. Rudzka-Ostyn (Ed.), *Topics in cognitive linguistics* (pp. 379–402). Amsterdam, Philadelphia.
- Durrell, M. (1988). Zu einigen deutschen und englischen Dimensionsadjektiven. Eine vergleichende Analyse. In H. H. P. Munske et al. (Eds.), *Deutscher Wortschatz. Lexikologische Studien* (pp. 93–115). Berlin, New York.
- Johnson, M. (1987). *Body in the mind. The bodily basis of meaning, imagination, and reason*. Chicago.
- Katz, J. J. (1972). *Semantic theory*. New York.
- Klein, E. A. (1980). A semantics for positive and comparative adjectives. *Linguistics and Philosophy*, 4(1), 1–45.
- Lakoff, G. (1987). *Women, fire, and dangerous things. What categories reveal about the mind*. Chicago.
- Lang, E. (1989). The semantics of dimensional designation of spatial objects. In M. Bierwisch & E. Lang (Eds.), *Dimensional adjectives. Grammatical structure and conceptual interpretation* (pp. 263–417). Berlin.
- Langacker, R. W. (1985). Observations and speculations on subjectivity. In J. Haiman (Ed.), *Iconicity in syntax* (pp. 109–150). Amsterdam, Philadelphia.
- Langacker, R. W. (1987). *Foundations of cognitive grammar. Vol. 1: Theoretical prerequisites*. Stanford.
- Langacker, R. W. (1990). *Concept, image, and symbol. The cognitive basis of grammar* (Cognitive Linguistics Research, 1). Berlin, New York.
- Lehrer, A., & Lehrer, K. (1982). Antonymy. *Linguistics and Philosophy*, 5(4), 483–501.
- Lukjanenko, S. V. (1989). Poslednij šans. In V. A. Trofimov (Ed.), *Pasportnyj režim. Sbornik F rasskazov* (pp. 12–13). Frunze.
- Lumsden, E. A., & Poteat, B. W. S. (1968). The salience of the vertical dimension in the concept of “bigger” in five- and six-year-olds. *Journal of Verbal Learning and Verbal Behavior*, 7(2), 404–408.
- Lyons, J. (1977). *Semantics* (Vols. 1 and 2). Cambridge.
- MacLaury, R. E. (1995). Vantage theory. In J. R. Taylor & R. E. MacLaury (Eds.), *Language and the cognitive construal of the world* (Trends in Linguistics. Studies and Monographs, 82) (pp. 231–275). Berlin, New York.
- MacLaury, R. E. (1997). *Colour and cognition in Mesoamerica. Constructing categories as vantages*. Austin.
- MacLaury, R. E. (2003). Vantages on the category of vertical extent: John Taylor's “high” and “tall”. *Language Sciences*, 25(3), 285–288.
- Maratsos, M. P. (1973). Decrease in the understanding of the word “big” in pre-school children. *Child Development*, 44(4), 747–752.
- Maratsos, M. P. (1974). When is a high thing the big one? *Developmental Psychology*, 10(3), 367–375.
- Moreno, M. et al. (1999). Adult performance in naming spatial dimensions of objects. *The Spanish Journal of Psychology*, 2(1), 39–54.

- Poceluevskij, E. A. (1974). Nulevaja stepen' kačestva i opisanie značenija kačestvennyx prilagatel'nyx i nekotoryx sočetanij s nimi. In V. M. Solncev (Ed.), *Problemy semantiki* (pp. 229–247). Moskva.
- Poceluevskij, E. A. (1977). Sravnitel'naja stepen' i svobodnoe upotreblenie prilagatel'nyx. *Voprosy jazykoznaniya*, 5, 62–71.
- Ravn, K. E., & Gelman, S. A. (1984). Rule usage in children's understanding of "big" and "little". *Child Development*, 55(6), 2141–2150.
- Raxilina, E. V. (2000). *Kognitivnyj analiz predmetnyx imen. Semantika i sočetaemost'*. Moskva.
- Rips, L. J., & Turnbull, W. (1980). How big is big? Relative and absolute properties in memory. *Cognition*, 8(2), 145–174.
- Ruzin, I. G. (1994). Kognitivnye strategii imenovanija: modusy percepcii (zrenie, slux, osjazanie, obonjanie, vkus) i ix vyraženie v jazyke. *Voprosy jazykoznaniya*, 6, 79–100.
- Sharoff, S. (2006). How to handle lexical semantics in SFL: a corpus study of purposes for using size adjectives. In S. Hunston & G. Thompson (Eds.), *Systemic linguistics and corpus* (pp. 184–205). London.
- Siegel, M. E. A. (1980). *Capturing the adjective*. New York, London.
- Suzuki, T. (1970). An essay on the anthropomorphic norm. In R. Jakobson & S. Kawamoto (Eds.), *Studies in general and oriental linguistics* (pp. 552–556). Tokyo.
- Švedova, N. Ju. (1970). *Grammatika sovremennogo russkogo literaturnogo jazyka*. Moskva.
- Taylor, J. R. (2003). Near synonyms as co-extensive categories: 'high' and 'tall' revisited. *Language Sciences*, 25(3), 263–284.
- Verhagen, A. (2005). *Constructions of intersubjectivity. Discourse, syntax, and cognition*. Oxford.
- Vinogradov, V. V. (1960). *Grammatika russkogo jazyka. Tom 1: Fonetika i morfologija*. Moskva.
- Vogel, A. (2004). *Swedish dimensional adjectives*. Stockholm.
- Vorotnikov, J. L. (2000). Bezotnositel'nye stepeni kačestva v russkom jazyke. *Izvestija AN. Serija literatury i jazyka*, 59(1), 36–43.
- Weydt, H., & Schlieben-Lange, B. (1998). The meaning of dimensional adjectives. Discovering the semantic process. *Lexicology*, 4(2), 199–236.
- Yoneoka, J. (1992). Adjectives and circularity. *Kumamoto Gakuen Setsuritsu*, 50, 389–413.