Review of *Scalarity in the Verbal Domain* by Olga Kagan, Cambridge University Press, 2015.

SUMMARY

Russian verbal prefixes have been a growing field of research in the past several years. Thanks to this, a lot of facts of their syntax and semantics have been accumulated; on the other hand, all this knowledge has revealed how poorly we still understand the nature of this morpheme. Thus, every new work on the subject is a welcome contribution to the unfolding picture. "Scalarity in the Verbal Domain" by Olga Kagan is a precious gem in the collection of linguistic papers on prefixation in Russian.

Most noticeably, the monograph is written in a clear, accessible language, it is perfectly structured, and the argumentation is thorough and transparent.

The work is based on two semantic approaches: formal and cognitive. This makes the potential audience of the book fairly large and versatile.

The book is organized as follows. After the general introduction, where the author introduces the notions and terms relevant to the research and lays out main theoretical premises, there are five chapters containing discussion and analysis of particular prefixes. The semantic characteristics of each prefix are examined at length, and then a formula is offered revealing its relation to a degree or an interval on a scale provided. All the formulas are explained in minute detail so that even a reader with no formal background can get a coherent idea of their content.

Several crucial ingredients of the author's Scale Hypothesis are introduced at the beginning (p. 26, (13)) and used as analytic tools throughout the book: types of scale (path, property, volume/extent, and time); relations between two degrees on a scale (<, >, ≥, ≤, =, etc.), which are determined by a prefix; sources of the standard of evaluation or comparison (one of the related degrees on a scale), which can be linguistic or nonlinguistic (provided by the context or the world knowledge). Paths and properties are typically lexicalized by a verbal stem (verbs of motion and degree achievements, respectively), volume/extent scales are provided by verbal arguments, and, finally, the time scale is presumably contributed by the functional structure of a sentence. In some cases, scales are contextual, and in others, they are introduced by prefixes themselves (e.g., one of the uses of pod-).

One of the main aims of this study is to unify the semantic analysis of different uses of each prefix under scrutiny. The author excludes idiosyncratic (non-compositional) uses of prefixes and circumfixes (prefix + -sja) from the study. The core component of nearly every prefix is spatial and other sub-components develop through metaphorical extension. The monograph investigates twenty-one prefixes out of twenty-eight listed in Shvedova (1982). The prefixes are grouped together on the basis of some common scalar feature. For example, po-, na- and pro- are related to a degree of change, whereas do-, nedo- and pri- to the degree achieved at the endpoint of an event.

The book is closed by two chapters of a more general nature. Chapter 7 deals with principles and parameters of prefixes and scales. Here, the author offers a summary of the monograph (tables 7.1, 7.2, 7.3 and 7.4 on pp. 200, 213, 215 and 219) and a number of generalizations falling out of her research. Chapter 8, whose content is partly repeated

from the latest book by the author (Kagan 2013), is devoted to the prefixational genitive with the focus on the idea of semantic incorporation.

The monograph also contains two useful appendices: 1. Changes along different scales, and 2. Compositional semantics of prefixed verbs.

EVALUATION

Given a messy semantics of Russian prefixes, the author does an impressive job of systematizing their meaning. Some issues, like unproductive and borrowed prefixes, have not been addressed in the literature before, to my knowledge.

The verbal uses of the prefixes po-, pod- and pre- are compared to their non-verbal uses (pp. 48-52, 118, 183), which opens a prospect for a more detailed study of prefixes on adjectives, adverbs and nouns.

Another promising line of research is the investigation of presuppositions triggered by different prefixes. This monograph lays a solid foundation for such research.

Different uses of prefixes are parametrized in Chapter 7 through a hierarchy of scales ((7) p. 203):

1. scales lexicalized by the stem > scales lexicalized by the object > time scale

The hierarchy determines the choice of a prefix (e.g., (9), p. 205): thus, scales lexicalized by the stem are paths and properties, scales lexicalized by the object are volume/extent scales, and a time scale is connected with Tense or Aspect, according to the author. In most cases the proposal is supported by the data.

Thorough analysis of an impressive number of prefixes, and beautiful generalizations and conclusions made on its basis are obvious strengths of the book. Yet, it also has its weaknesses, which I will deal with below.

In my opinion, in concentrating solely on the semantic aspect of prefixes, the book demonstrates how important syntax actually is. It is simply impossible to give a serious account of prefixes without taking structure into consideration. Thus, on p. 204 in example (8), the author offers two sets of sentences to show the interaction of the prefix pro- with different scales. In (8-a), the verb rabotat' 'work' comes with the time scale (prorabotal dva goda 'worked for two years'), and in (8-b), presumably, with the volume/extent scale lexicalized by its object (prorabotat' vse voprosy 'to work through all the issues'). The verb rabotat' is intransitive, so it is impossible to say *rabotat' vse voprosy without a prefix. It looks like it is the prefix that introduces the object into the structure of intransitive verbs; hence there is no volume/extent scale prior to prefixation in the case discussed.

The distinction between perfective and imperfective aspects has not received enough attention. On p.136, discussing the prefix pere- (of excess), the author mentions a scale of intensity (which, I presume, is a variety of a property scale), which can only be supplied by verbs with relevant semantics (try, strain, press, work etc.). In my opinion, the assumption is not quite right. First, the semantic component of intensity can be found in many more verbs (gaze, shout etc.), and, second, intensity is best measured on imperfective verbs. Compare two minimal pairs in (2) and (3):

2. a. pereigrat' PERFECTIVE 'play too much', excess (one of the interpretations) vs pereigryvat' IMPERFECTIVE 'act too intensely' (about actors)

3. a. nedolubit' 'not experience enough love (in life)' PERFECTIVE vs nedolublivat' 'slightly dislike sb' IMPERFECTIVE

4. podduvajet 'there is a slight drought', (menja) podtashnivajet 'I am slightly sick' both IMPERFECTIVE and have no perfective counterparts

The perfective verbs in the minimal pairs above carry prefixes whose interpretation is predicted in the book, the prefixes on the imperfective verbs seem to measure the intensity of an activity or a state. In the data provided by the author there is a mix of perfective and imperfective verbs, where the latter either have no perfective correspondences (like in (4) above) or have a clearly different interpretation (e.g., nedojedat' 'starve' (p.85)). We can see quite a number of verbs used only imperfectively in Chapter 6, especially with the non-productive prefix pred- referring to some future event. However, there is no discussion about the scalar nature of outer aspect or lack thereof.

One issue is connected with the genitive case of arguments, which has even deserved a separate chapter in the book. Chapter 8 justifies the analysis of genitive arguments with the help of semantic incorporation along the lines of van Geenhoven (1998). On p. 231, the author writes (V = verb, NP = Noun Phrase, gen = genitive): "As a result of semantic incorporation, the [V NPgen] constituent becomes indivisible for further semantic operations. Essentially, we get a new verb milk-give." This means that the verb has no available object, i.e., it can be considered intransitive. Yet, throughout the book such genitive nominals are analyzed on a par with accusative objects:

5. napech pirogov (gen) 'bake many cakes', pereest' fruktov (gen) 'eat too much fruit', dochitat' knigu (accusative) 'finish reading a/the book' (p. 199)

On p. 55, the author characterizes the prefix na-, systematically co-occurring with genitive nominals, in the following way: "it measures ... the amount of objects that undergo a change in the course of the event", and in the formula in (17) includes an individual. This is confusing, since on p. 228 it is claimed that "these nominals denote properties and are of the semantic type <e,t>".

In addition, the semantic incorporation analysis defines another problem for the theory. If genitive nominals are to be treated as properties that become a part of the verbal meaning, it is not correct to treat such nominals as representations of volume/extent scale available to a prefix. Nominals become inaccessible for further semantic operations. Rather, verb phrases like milk-give now contain a property scale, and a prefix combining with it measures this property (along the lines of Romanova 2007 on cumulative na-).

Genitive nominals are also discussed with respect to certain prefixes, for example do-, nedo- and pere- of excess. While I mostly agree with the analysis of nominals following verbs with pere- and nedo- (they are basically the same as with na-), I find it difficult to subscribe to the account of genitive after do- verbs. First, it is limited to verbs which can assign genitive even without a prefix: kupit' jablok 'buy some apples' or dat' moloka 'give some milk'. These verbs are already perfective, and the attachment of do- does not change the ability of their arguments to alternate between genitive and accusative cases. Second, the interpretation of genitive nominals after such verbs is clearly different from semantically incorporated properties with narrow scope and other consequences of having

no separate existence. Kupil jablok means 'bought SOME apples', whereas nakupil jablok does not. And, second, do- does not combine with genitive objects after other verbs whose lexical semantics is reminiscent of that of 'give':

6. *Dodaril igrushek (gen) 'gave more toys as a present'

It is also true that other prefixes do not allow the assignment of genitive even after the verbs 'buy' and 'give', but this might be an altogether different story.

Here we enter the subject of different types of predicates and different types of arguments, for it is important to discern between, say, verbs of creation and verbs of consumption, verbs of sound emission and verbs of perception and so on. Each type imposes additional restrictions on prefixation, and when the author writes about strict incremental themes (p. 149), she only means verbs of consumption, whereas the prefix under discussion (iterative pere- 're-') could behave differently with verbs of creation (some of which are also considered to be incremental theme verbs). The fact that you can not repeat the event of eating is not so much connected with the incrementality of the theme as with the type of the predicate. The prefix pro- is said not to be fully productive (p. 61): it does not attach to such phrases as *prostroit' dom 'build a full house'. I don't think productivity is an issue here. The impossibility of pro- in this case is rather explained by certain limitations found in the semantics of creation verbs and effected objects, which do not exist at the beginning of the event (vonStechow 2000).

This returns us to the question of subjectivity of certain assumptions found in the monograph. It is claimed, for example, that verbs like rezat' 'cut', rubit' 'chop' and pilit' 'saw' introduce a component of moving along a path (p. 127), whereas verbs of non-directed motion (indeterminate verbs of motion) do not contribute a path scale. The description of iterative pere- on pp. 144-153 presupposes world knowledge, which can differ from person to person. Thus, the author says that the verbs with this prefix entail the rectification of the unsatisfactory result achieved in the course of the event denoted by the same verb without the prefix (p. 146). The verbs perestirat' 'pere-wash' and pereuchit'sja 'pere-study' are offered as illustrations of such a meaning. However, other speakers' knowledge of the world does not have to coincide with the assumption here: I can imagine rewashing a dress just in case, and the verb pereuchit'sja means an altogether different thing to me: it involves the component of change, which is not mentioned among the uses of pere-. In fact, the list of my complaints connected with the author's subjectivity is fairly long. However it is not so interesting to go into their lengthy discussion or start objecting against some native judgements (see, e.g. (7) and (8) on p. 167).

A much more interesting question is why the author uses different labels for presumably the same prefixes, like terminative do- and additive do-, when their interpretations are determined by a verb or a larger context. For example, the verb dosidet' (do ultra) 'do-sit (till the morning)' (p. 71) carries terminative do-, whereas dospat' dva chasa 'do-sleep for two more hours' (p.78) additive do-. If we change the context, we can actually get dospat' do utra 'do-sleep till the morning'. The example in (11-b) doplatit' 'do-pay, pay more money until the required sum is covered' can only have additive do-. The same situation is observed with other prefixes (e.g., spatial pere-, temporal pere-, iterative pere-, pere- of excess). This seems to somehow undermine the enterprise of prefix semantics unification. Moreover, I still cannot understand what comes first: a prefix or a scale. Do we apply spatial pere- to paths or do paths define the choice of one of several pere-'s? According to the premises of the theory, the latter must be the case, but then why classify prefixes into subuses?

Finally, it is not clear to me why one of the most noticeable recent works on the topic has not been mentioned in the book, considering a high degree of subject overlap: the unified analysis of prefixes from the perspective of scalar semantics. I mean papers by Inna Tolskaya (Tolskaya 2007, 2013, 2015). I think, the approaches adopted here and in Tolskaya's research are different enough, and the reader would have benefited from a brief comparison of the two.

In spite of my questions and criticisms, I cannot but admire a feat of a very thorough and profound investigation undertaken by Olga Kagan. As I said above, the book is superbly written and suits a large and diverse audience of linguists interested in the intricate topic of verbal prefixation in Russian.

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