

PREFACE

The objective of this book is to show how Russian verbal prefixes express meaning, even when they are used to form the perfective partners of aspectual pairs. We argue that the prefixes in verbs like *написать/na-pisat'* 'write' and *сварить/s-varit'* 'cook' have a semantic purpose, even though the corresponding imperfective verbs *писать/pisat'* 'write' and *варить/varit'* 'cook' have the same lexical meanings. We set forward a new hypothesis, namely that the Russian verbal prefixes function as verb classifiers, parallel to numeral classifiers. Our argument draws on research conducted under the auspices of grants from the Norwegian Research Council and the Center for Advanced Study at the Norwegian Academy of Science and Letters in Oslo. In this book we offer the highlights of our findings; readers who wish more detail may consult our articles cited in the references. The target audience includes Slavic linguists and general linguists, as well as teachers and advanced learners of Russian. Though the argumentation is inspired by the framework of cognitive linguistics, this book is designed to be relatively theory-neutral, attractive to all kinds of linguists, and accessible to non-linguists. The studies in the book make use of quantitative research on corpus data and statistical models (chi-square, logistic regression, etc.), though these are presented in a common-sense way that assumes no special expertise. To supplement the book we have created a user-friendly interactive webpage that can be accessed for free at <http://emptyprefixes.uit.no/book.htm>. This webpage houses links to our database plus additional data from the studies we cite.

This book narrates recent breakthroughs in research on Russian aspect and demonstrates a range of methodologies designed to probe the relationship between the meaning and distribution of linguistic forms. These methodologies are used to investigate the "empty" prefixes (Chapters 2 and 3), alternating constructions (Chapter 4), prefix variation (Chapter 5), and aspectual triplets (Chapter 6). Though these phenomena have long been known to exist, their extent and behavior have not been previously explored in such detail. We propose (Chap-

ter 7) that the “purely aspectual prefixes” constitute a system of verbal classifiers akin to numeral classifiers found in many languages of the world. In other words, the verbal prefixes select verbs according to broad semantic traits, categorizing them the way numeral classifiers categorize nouns. The purpose of the prefixes is to convert amorphous states and activities into discrete events and to group verbs according to the types of events they express.

Chapter 1 (Aspectual Prefixes: Emptiness vs. Overlap) presents the Russian aspectual system and the problem of the “purely aspectual prefixes” against the context of other uses of verbal prefixes and suffixes. Two hypotheses are advanced, both of which are well documented in the scholarly literature: the Empty Prefix Hypothesis and the Overlap Hypothesis. According to the Empty Prefix Hypothesis, which is dominant in the field, a prefix that forms an aspectual pair is void of meaning; it merely marks a verb as perfective. The alternative Overlap Hypothesis proposes instead that the meanings of prefixes overlap with the meanings of verbs when they are used to form aspectual pairs. It is this overlap that creates an illusion of emptiness. The remaining chapters provide various kinds of evidence for the Overlap Hypothesis. The database that underlies the studies described in the book is also featured in this chapter.

Chapters 2, 3, and 4 present the principled quantitative methods we have developed to probe the meanings of the prefixes. The prefixes are grouped according to the number of base verbs they combine with to form aspectual partners: the “small” prefixes perfectivize smaller numbers of base verbs (ranging from 3 to 123), whereas the “big” prefixes combine with larger numbers of base verbs (ranging from 142 to 417). We have designed two different methods to handle these two groups of prefixes: “radial category profiling” and “semantic profiling.” In addition, the “constructional profiling” method integrates the variable of grammatical constructions into a case study contrasting the meanings of three prefixes.

Chapter 2 (Small Prefixes: Radial Category Profiling) introduces the radial category model and gives case studies of the radial category profiling methodology applied to “small” prefixes. This method has two steps. In step one we map out the meanings of a prefix on the basis of verbs where the prefix clearly has a “non-empty” meaning because it does not form partner verbs for the imperfective base verbs. Thus step one involves verbs like *раскоммандь/raz-toptat'* ‘trample,

crush by stamping' (from *монтировать/toptat'* 'stamp one's feet') and *раздуть/raz-dut'* 'inflate, swell by blowing' (from *дуть/dut'* 'blow') and yields a radial category of meanings including items like CRUSH and SWELL. In step two we compare the prefixal meanings found in step one with the meanings of the base verbs in the "purely aspectual" formations, such as *раздавить/raz-davit'* 'crush', the perfective partner of *давить/davit'* 'crush' and *распухнуть/raz-rixnut'* 'swell', the perfective partner of *пухнуть/rixnut'* 'swell'. We show that there is a consistent pattern: the meanings of the base verbs in the supposedly "empty" formations match the meanings of the prefixes in the "non-empty" uses. This finding directly supports the Overlap Hypothesis.

Chapter 3 (Big Prefixes: Semantic Profiling) applies the semantic profiling methodology to the "big" prefixes, where the data is too unwieldy to be handled by the radial category profiling method. Semantic profiling uses a statistical analysis based on the semantic tags assigned to verbs in the Russian National Corpus, and shows that there are significant differences in the semantic patterns of the verbs that are prefixed with the five "big" prefixes. In other words, each prefix combines with verbs of a unique semantic profile.

Chapter 4 (Prefixes and Syntax: Constructional Profiling) investigates the interaction of syntax and prefixation in more detail, looking at the alternation between *погрузить/по-gruzit'* *ящики на телегу* 'load boxes onto the cart' ("theme-object") and *нагрузить/на-gruzit'* *телегу ящиками* 'load the cart with boxes' ("goal-object"). This study applies the methodology of "constructional profiling." Corpus data reveals that each of the three prefixes that form "purely aspectual" perfectives for this verb has a different syntactic preference: *по-* prefers the theme-object construction, *на-* prefers the goal-object construction, and the distribution for *за-* is more balanced, but strongly influenced by metaphorical uses (*загрузить/за-gruzit'* *человека работой* 'load a person with work'). The differences in distribution of constructions are statistically significant, suggesting that the three perfective partners of *грузить/gruzit'* 'load' are distinct. Hence, the three prefixes involved must likewise be distinct.

The notion of the aspectual pair is challenged by findings presented in chapters 5 and 6, where we see that three, four, or even as many as seven verbs may be involved in a "purely aspectual" relationship. Chapter 5 (Prefix Variation) discusses the use of more than one prefix to form "purely aspectual" perfective partners for a given base

verb. Though we tend to assume that each base verb combines with only one prefix, it is actually the case that over one-fourth of base verbs are more promiscuous, combining with up to six prefixes. *Грузить/gruzit'* 'load', for example, has three such perfective partner verbs: *загрузить/za-gruzit'*, *нагрузить/na-gruzit'*, and *погрузить/po-gruzit'*, all of which mean 'load'. Prefix variation reveals an interaction between the meanings of the prefixes and the meanings of the base verbs. Both similar and contrastive meanings can motivate prefix variation. Where a binary combination of prefixes exhibits similar meanings, the majority of associated base verbs form a coherent semantic group, as in the case of change-of-state verbs associated with *za-*|*o(b)-*. However, even in combinations that indicate strong similarity, there are contrasting meanings. Some combinations are motivated largely by contrasting meanings, as in the case of *ot-*|*pro-*, and unattested combinations may involve prefixal meanings that are altogether incompatible.

Whereas prefix variation shows us that a given imperfective base verb can have multiple perfective partner verbs, in chapter 6 (Aspectual Triplets) we are confronted with the formation of secondary imperfectives from "purely aspectual" prefixed partner verbs, as in *множиться/tnožit'sja* 'multiply', which has the prefixed perfective *умножиться/u-tnožit'sja* and also the secondary imperfective *умножаться/u-tnožat'sja*. Over one-third of verbs that perfectivize with a prefix also show evidence of secondary imperfectivization in the Russian National Corpus, and Google searches reveal such formations for nearly all verbs. If indeed the prefix had no meaning beyond "+ perfective," there would be no motive to form secondary imperfectives.

Chapter 7 (The Verb Classifier Hypothesis) presents the hypothesis that the perfectivizing prefixes are verb classifiers. Here we compare the behavior of Russian prefixes with that of other classifiers in languages that are known to have numeral and verb classifier systems, and contextualize this in a discussion of overall parallels between nouns and verbs in Russian. We show that whereas numeral classifiers function in the presence of quantifiers to sort nouns according to the typical shape of an object, the Russian perfectivizing prefixes sort verbs in the presence of perfective aspect (a quantifier) according to the typical path (a kind of shape) of an event. Recognizing Russian prefixes as verb classifiers facilitates typological comparison of Rus-

sian with other verb classifier languages and improved description of the language.

In Chapter 8 (Conclusion) we summarize the findings and how they support the Overlap and Verb Classifier Hypotheses, which have both theoretical and practical implications. The Empty Prefix Hypothesis is tacitly assumed in all textbooks of Russian, which instruct students to memorize hundreds of prefix + verb combinations to form aspectual pairs. This is a formidable and frustrating task. Language learning could be restructured to reflect the meaningful patterns of the Russian verb classifier system, thus making mastery of Russian aspect more coherent and palatable.

The CLEAR group at the University of Tromsø
(Cognitive Linguistics: Empirical Approaches to Russian)

Laura A. Janda

Tore Nessel

Olga Lyashevskaya

Svetlana Sokolova

Julia Kuznetsova

Anna Endresen

Anastasia Makarova