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The Dative Dispositional Construction in Russian

MA thesis submitted by

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Abstract

The study of verbal alternations, namely different realizations of the same verbal concept and the derivational links between them, has long been one of the central issues in theoretical linguistics. This thesis investigates the Russian variant of the Dative Dispositional Construction (DDC), illustrated in (i); the DDC is a verbal alternate available for certain intransitive verbs, which also have a ‘regular’ realization, shown in (ii).

(i) ***Mne ne rabotaetsja.***

I_{DAT} NEG work_{PRESENT.3SG-SJA}

‘I don’t feel like working’ / ‘I can’t work’ / ‘I feel that my work is going badly’

(ii) ***Ja (ne) rabotaju.***

I_{NOM} NEG work_{PRESENT.1SG}

‘I (don’t) work’ / ‘I’m (not) working’

This study presents novel findings that contribute to a better understanding of the Russian DDC. Two surveys among a large number of native Russian speakers were conducted as part of the study; the first one systematically collected grammaticality judgments for different types of the DDC, and the second one investigated the interpretations available for it. The results of the surveys resolve some of the issues that have been controversial in the literature. For example, they show that the Russian DDC is ungrammatical without an adverb or negation, and that it expresses either a subjective evaluation regarding an actual eventuality (e.g. ‘I feel that my work is going badly’), or a disposition towards the possibility to participate in a potential eventuality (e.g. ‘I don’t feel like working’). In addition to the findings of the surveys, this study offers a revised definition of the set of verbs that participate in the DDC alternation: it is shown that the derivational process that forms the DDC is sensitive to the thematic information of the input verb. Furthermore, it is shown via diagnostics that the input verb and its theta-role are not accessible in the syntactic structure of the DDC alternate, meaning that they are manipulated as part of the derivational process.

Based on the more solid empirical basis created in the first part of the study, a theoretical analysis of the Russian DDC is proposed. It is argued that the DDC alternate is derived by a lexical operation that creates a new verbal entry by modifying the base verb and its theta-role. The proposed analysis has several theoretical consequences; most importantly, it strongly supports the view of the lexicon as an active module of grammar where derivational operations can apply (e.g. Siloni 2002, Reinhart and Siloni 2005, Horvath and Siloni 2008), as opposed to approaches that view the lexicon as a mere inventory and set all derivational processes in the syntax (e.g. Borer 2004, Marantz 1997, Pyllkanen 2008).

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Abbreviations

1	first person
3	third person
ACC	accusative
AgrP	Agreement Phrase
AUX	auxiliary
DAT	dative
FEM	feminine
GEN	genitive
GER	gerund
INF	infinitive
INST	instrumental
MASC	masculine
NEG	negation
NEU	neuter
NOM	nominative
NP	Noun Phrase
PAST	past tense
PERF	perfective
PI	plural
PREP	prepositional
PRESENT	non-past tense
QUEST	question particle
Sg	singular
TP	Tense Phrase
V	verb
VP	Verb Phrase

1. Introduction

One of the core issues in theoretical linguistics is the encoding of concepts, namely the interface between concepts, syntactic structure, and meaning. It is widely known that the same abstract concept, e.g. the concept of *breaking* or the concept of *washing*, often has several different verbal realizations, such as transitive, passive, unaccusative, reflexive, reciprocal, middle, etc.. The phenomenon exists across languages, and it is generally accepted that the different verbal alternates are systematically related to each other through derivational links.

This study investigates the Russian variant of a verbal alternate available across Slavic languages: the Dative Dispositional Construction (henceforth- DDC).¹ An example of the Russian DDC is shown in (1); the ‘regular’ realization of the same verb (henceforth- *basic*, *base* or *active* derivation) is shown in (2).²

1. ***Mne ploxo rabotaetsja.***

I_{DAT} badly work_{PRESENT.3Sg}-SJA

‘I don’t feel like working’ / ‘I can’t work (due to my psychological circumstances)’ / ‘I feel that my work is going badly’

2. ***Ja (ploxo) rabotaju.***

I_{NOM} badly work_{PRESENT.1Sg}

‘I work (badly)’ / ‘I’m working (badly)’

The two verbal alternates differ from each other both in structure and in meaning. Syntactically, the DDC involves a Dative noun phrase and a verb with an invariable ‘default’ inflection and a so-called ‘reflexive’ morphology (-SJA suffix); in the basic derivation, on the other hand, the verb is not suffixed with -SJA and agrees with a Nominative subject. Semantically, the DDC describes a mental state regarding the eventuality denoted by the basic alternate.

The Russian DDC has received much attention in the literature and has been analyzed within various theoretical frameworks; among the more recent analyses are e.g. Benedicto 1995, Marušič and Žaucer 2006, Rivero and Arregui 2012, Zeldowicz 2011. However, some issues remain unresolved. First, there is disagreement in the literature regarding the basic descriptive properties of the construction, such as the environments in which it is licensed and its interpretation. Second, the existing analyses vary significantly in the way they propose that the DDC alternate is derived; for example, Franks (1995) suggests that the derivation is a lexical operation on the base verb’s theta-grid, Benedicto (1995) and

¹ The DDC is also known in the literature as the Feel-Like Construction, the Dative Impersonal Reflexive Construction, the Involuntary State Construction, the Dative Existential Disclosure, the Desiderative Inversion, and the Dative Habitual Construction.

² All examples provided in this study are in Russian unless noted otherwise.

Rivero and Arregui (2012) propose that the base verb is embedded under a functional modal head, and Marušič and Žaucer (2006) suggest that there is a null psych-predicate above the verbal phrase headed by the base verb.

Since an accurate description of the construction's properties is a prerequisite for an adequate analysis, the current investigation of the DDC first explores the empirical basis, and then offers a theoretical analysis based on the findings.

In order to contribute to a more solid empirical basis, two surveys among a large number of native Russian speakers were conducted as part of this study. This method has not been used in previous works on the DDC, which relied on data collected from corpora and on the intuitions of the authors (or a small number of speakers). The results of the surveys resolve some of the controversial issues regarding the construction. First, they show that the presence of an adverb or negation is mandatory in the Russian DDC, in contrast to its counterparts in other Slavic languages. Second, they reveal that the construction has two types of meaning: it can express either a subjective evaluation regarding an actual eventuality (i.e. *'X feels that Y is going well / badly / easily /...'*), or a disposition towards the possibility to participate in a potential eventuality (i.e. *'X feels / doesn't feel like doing Y'* or *'X feels that in view of her psychological circumstances, she can / cannot Y'*).

An additional contribution of this study to the empirical basis is the revision of the existing definition of the set of verbs that participate in the DDC alternation. While the common view is that the input for the DDC formation is unergative verbs, i.e. intransitives with an externally mapped argument, it is shown here that in fact only a subset of unergatives participate in the alternation. Based on these findings, it is argued that the derivational process creating the DDC is sensitive to the theta-role of the verb's argument rather than to its external mapping onto syntactic structure. This suggests that the derivation takes place in the lexicon, since the content of theta-roles is not accessible post-lexically.

The claim that the DDC is created in the lexicon is at odds with many recent analyses that derive the construction syntactically, such as Benedicto 1995, Marušič and Žaucer 2006, Rivero and Arregui 2012. As mentioned above, these analyses propose that the DDC is formed via syntactic embedding of the VP headed by the base verb under a functional modal head or a null psychological predicate. However, it is shown here that the predictions of such analyses are not borne out for the Russian variant of the DDC, which further supports the view that it is formed lexically.

Based on the empirical findings, a lexical operation deriving the DDC alternate from the base verb is defined. The operation involves modification of the input verb and its theta-role and results in a verbal entry that denotes a psychological state (evaluation or disposition) and has an Experiencer argument.

The role of the mandatorily present adverb or negation is to specify whether the psychological state is positive or negative.

The analysis proposed in this study has consequences for a controversial issue in the study of the relations between verbal realizations: the division of labor between the lexicon and the syntax. Syntactocentric approaches (Borer 2004, Marantz 1997, Pytkanen 2008, among others) place the whole derivational burden on the syntactic component of grammar, and view the lexicon merely as an inventory of items. Other approaches, however, maintain that the lexicon is an active module of grammar, which allows application of derivational operations (Siloni 2002, Reinhart and Siloni 2005, Horvath and Siloni 2008, Horvath and Siloni 2010, among others). Under the latter view, certain operations that are responsible for verbal alternations are syntactic, while other operations are lexical. The findings presented in this study regarding the Russian DDC alternation lend strong support to the latter view, namely that the lexicon is an active component of grammar, in which derivational operations can apply.

The thesis is organized as follows. Chapter 2 is concerned with the basic properties of the Russian DDC. First, I show the main structural and semantic characteristics of the construction, in comparison with its active alternate. Next, I introduce two issues that are controversial in the existing DDC literature, and present and discuss the findings of the surveys conducted in order to resolve them. Chapter 3 is concerned with the input for the DDC formation process, i.e. the verbs that participate in the DDC alternation. The commonly accepted view is that the Russian DDC is formed from unergative verbs, but I argue, based on counterexamples, that this definition of the input is not accurate and offer a revised definition. Chapter 4 is concerned with the derivational process that creates the DDC alternate. First, the argument structure of the DDC is examined; it is shown that the argument of the input verb cannot be detected in the DDC alternate, which means that the original theta-role is manipulated in the course of the formation process. Next, I discuss the component of grammar in which the DDC is created and argue in favor of a lexical rather than syntactic formation of the Russian DDC. Finally, the lexical operation that creates the DDC is defined; the operation includes modification of the input verb's theta-role and results in a verbal entry that is interpreted as a psychological state with an Experiencer argument. The entailments involved in the interpretation of the psychological state and the role of the adverb in the interpretation are discussed in the last part of the chapter. Chapter 5 provides the details regarding the methods and the results of the two surveys reported in Chapter 2.

2. The Dative Dispositional Construction: Basic Properties

This chapter is concerned with the basic properties of the Russian DDC. In section 2.1, I introduce the main structural and semantic characteristics of the construction, in comparison with its active alternate. Structurally, the DDC involves an ‘impersonal’ verbal inflection, a –SJA suffix on the verb, and a Dative subject; semantically, it features a change in the type of eventuality described in the sentence and in the thematic role of the participant. Sections 2.2 and 2.3 are concerned with two important issues that are controversial in the existing DDC literature: the environments in which the construction is licensed and its possible meanings, respectively. In each of the two sections, I introduce the unresolved questions and then present and discuss the findings of a survey conducted among native Russian speakers in order to shed light on these questions.

2.1 Structural and Semantic Characteristics

Compare the DDC sentence in (3) with the basic derivation of the same verb in (4):

3. ***Mne ploxo rabotaetsja.***

I_{DAT} badly work_{PRESENT.3Sg}-SJA

‘I don’t feel like working’ / ‘I can’t work’ / ‘I feel that my work is going badly’

4. ***Ja (ploxo) rabotaju.***

I_{NOM} badly work_{PRESENT.1Sg}

‘I work (badly)’ / ‘I’m working (badly)’

Regarding the form of the verb in each derivation, two differences are evident. The first one concerns verbal inflection. In Russian, verbs agree with their Nominative subjects in number and person in the Present (‘non-past’) tense and in number and gender in the Past. In the DDC, however, the verb shows invariable inflection: 3rd person singular in the Present and singular neuter in the Past. This verbal inflection is sometimes referred to in the literature as ‘default’ or ‘impersonal’. In addition, the verb in the DDC is suffixed with –SJA, the so-called ‘reflexive morpheme’, parallel to the clitic SE found in other Slavic languages and in Romance languages. The suffix is realized as –*sja* in the Present tense, and –*s’* in the Past. This morphology is found on different types of verbs in Russian (for a survey, see e.g. Gerritsen 1990), most notably on intransitives that have a transitive alternate without –SJA, such as reflexives, reciprocals, unaccusatives, middles, and passives.

Another structural difference between the two derivations concerns the noun phrase. While the subject in the active derivation (4) appears with Nominative case, the DDC features a Dative subject. That the Dative noun phrase in the construction is a subject can be shown via standard subjecthood diagnostics:

subjects in Russian can control PRO in gerunds and antecede ‘own’ anaphors, such as *sebja/sebe/soboj* and the reflexive possessive *svoj*. The following examples show that the Dative phrase in the DDC sentences (5c) and (6c) can control into gerunds and antecede reflexives, similarly to the Nominative subjects in the (a) examples. Dative indirect objects (the (b) examples) do not show this behavior.

5. (a) *Ja_k čitaju PRO_k sidja u okna.*
 I_{NOM} read_{PRESENT.1Sg} sit_{GER} by window
 ‘I read while sitting by the window’ / ‘I’m reading while sitting by the window’
- (b) *Maša_k mne_j čitaet PRO_{k/*j} sidja u okna.*
 Maša_{NOM} I_{DAT} read_{PRESENT.3Sg} sit_{GER} by window
 ‘Masha is reading to me while she is sitting by the window.’
- (c) *Mne_k ne čitajetsja PRO_k sidja u okna.*
 I_{DAT} NEG read_{PRESENT.3Sg-SJA} sit_{GER} by window
 ‘I can’t read / I don’t feel like reading / my reading is going badly when I’m sitting by the window’
6. (a) *Ja_k čitaju v svoje_k komnate.*
 I_{NOM} read_{PRESENT.1Sg} in own room
 ‘I read in my own room’ / ‘I’m reading in my own room’
- (b) *Maša_k mne_j čitaet v svoje_{k/*j} komnate.*
 Maša_{NOM} I_{DAT} read_{PRESENT.3Sg} in own room
 ‘Masha is reading to me in her own room’
- (c) *Mne_k ne čitajetsja v svoje_k komnate.*
 I_{DAT} NEG read_{PRESENT.3Sg-SJA} in own room
 ‘I can’t read / I don’t feel like reading / my reading is going badly when I’m in my own room’

The diagnostics strongly suggest that the Dative phrase in the DDC is indeed a subject. Dative subjects are a well-known and widely discussed phenomenon in Russian and can also be found with adjectives (e.g. *Mne xolodno* (I_{DAT} cold) ‘I am cold’), with modals (e.g. *Mne nado bylo uži* (I_{DAT} must was_{NEU} leave_{INF}) ‘I should have left’ / ‘I had to leave’), and in infinitival clauses (e.g. *Mne ne sdat’ etot ekzamen* (I_{DAT} NEG pass_{INF} this exam) ‘It is not in the cards for me to pass this exam’).³

³ It should be noted, however, that these subjecthood diagnostics are not uncontroversial. Though they are used by many authors (e.g. by Schoorlemmer (1993) and Benedicto (1995) specifically for the DDC), Greenberg and Franks (1991), Komar (1999), and others show that non-subjects can exhibit the properties of antecedent ‘own’

Besides these structural characteristics, the DDC exhibits a particular semantic effect; while the active derivation in (4) describes an *activity* of working, the DDC in (3) is about a *psychological state* related to this activity, e.g. not feeling like working (the precise interpretations of the DDC are discussed in section 2.3 below). In other words, the DDC sentence denotes a different type of eventuality from the one denoted by the active alternate. Accordingly, the role of the participant in the eventuality is different; while the Nominative subject in (4) is an Agent performing the activity, the Dative subject in (3) is understood as an Experiencer of the psychological state. This characteristic semantic effect sets the active / DDC alternation apart from other structurally similar constructions in Russian (see Appendix I for an overview of similar constructions).

Although the Russian DDC has been widely discussed in the literature, there is still disagreement regarding some basic descriptive properties of the construction, specifically the environments in which it is licensed and its possible interpretations. Since an accurate description of these characteristics is a prerequisite for any analysis of the construction, two surveys were conducted as part of this study to shed light on the controversial issues. The following sections (2.2 and 2.3) introduce the unresolved questions and discuss the findings of the surveys.

anaphors and controlling into gerunds as well. Therefore, they argue that these properties are not a sufficient condition for determining the subjecthood of Dative phrases, and additional evidence needs to be considered. Moore and Perlmutter (2000) suggest some additional diagnostics, based on which they argue that while the Dative phrase in infinitival clauses is a true subject, this is not the case for the Dative phrases in the other abovementioned constructions, including the DDC. Instead, the Dative phrase in the DDC is analyzed as an 'inversion nominal', meaning that it is an initial subject but a surface indirect object (the analysis is in the Relational Grammar theoretical framework). Moore and Perlmutter present three properties that true Dative subjects exhibit: (i) they determine gender/number agreement on adjectival and participial predicates, (ii) they can be a controlled empty category, and (iii) they can undergo raising; they argue that the fact that 'inversion nominals' do not manifest these properties is evidence for their non-subject status in the surface structure. However, these diagnostics cannot be applied to the DDC for independent reasons. First, as noted by Moore and Perlmutter themselves (p.395 fn. 24), since the DDC does not occur with adjectival predicates and is incompatible with passive (thus ruling out participial predicates), property (i) cannot be tested in the construction. Controllability (property (ii)) and raising (property (iii)) are problematic to test in the DDC as well, because both require an infinitival environment, while the DDC is incompatible with infinitival context due to independently motivated facts about Russian impersonal verbs (this fact is also noted by the authors themselves; p.402 fn. 32). Under other existing analyses of the DDC, the Dative phrase is viewed as a subject on the basis of the standard diagnostics shown above (anaphor binding and control into gerunds); this view is adopted in this study as well.

2.2 Licensing Environments

2.2.1 Controversy in the Literature

According to Pariser (1982) and Franks (1995), the Russian DDC necessarily involves the presence of some adverbial element, including negation. Under this view, while (7a) and (7b) are completely natural sentences, (7c) is ungrammatical or at least very strange.

7. (a) ***Mne ne rabotaetsja.***

I_{DAT} NEG work_{PRESENT.3Sg-SJA}

'I don't feel like working' / 'I can't work' / 'I feel that my work is going badly'

(b) ***Mne xorošo rabotajetsja.***

I_{DAT} well work_{PRESENT.3Sg-SJA}

'I feel like working' / 'I can work' / 'I feel that my work is going well'

(c) ****/?? Mne rabotaetsja.***

I_{DAT} work_{PRESENT.3Sg-SJA}

However, while there is general agreement regarding the grammaticality of the negated DDC (7a) and the adverbial DDC (7b), the views regarding the 'bare' type (7c) vary significantly. According to Marušič and Žaucer (2006), 'bare' DDC's are licensed in Russian in downward entailing (DE) environments, not only under negation (as in (7a) above), but also in Yes/No questions (see (8)), in relative clauses in the restrictor of universal quantifiers (see (9)), and in the antecedent of conditionals (see (10)).

Yes/No Question:

8. ***Tebe rabotajetsja v pjatnicu?***

you_{DAT} work_{PRESENT.3Sg-SJA} in friday

'Do you feel like working on Fridays?' / 'Are you able to work on Fridays?'

(From: <http://otvet.bigmir.net/question/751663/>, 2012)

Relative Clause in the restrictor of a Universal Quantifier:

9. ***V blogax moguť i dolžny pisat' vse komu pišetsja.***

in blogs can and must write_{INF} all who_{DAT} write_{PRESENT.3Sg-SJA}

'Everybody who feels like writing can and must write in blogs'

(From: <http://yerevan.ru/2010/04/02/foto-progulka-po-erevanu-prodolzhenie/>, 2010)

Antecedent of Conditionals:

10. *I ja mogu 10 tyš' vydat' esli mne pišetsja...*
and I_{NOM} can 10 thousand deliver_{INF} if I_{DAT} write_{PRESENT.3Sg-SJA}
'I also can deliver ten thousand [words a day], if I feel like writing'

(From: http://vk.com/topic-13125990_22236637, 2010)

Fici (unknown) suggests that 'bare' DDC's are even less restricted, and that they can be found without any special context, as in (11). A similar view is held by Gerritsen (1990); according to her, the presence of an adverb or negation is not obligatory, and when it is absent, positive modification is implied.

11. *Strano, kogda ja byla odinokoj... mne pisalos'.*
strange when I_{NOM} was lonely I_{DAT} write_{PAST.Sg.NEU-SJA}
'Strange, when I was lonely... I felt like writing / I could write / my writing was going well'

(Jaxontova (1996-1998). From the Russian National Corpus: <http://www.ruscorpora.ru>)

These views are obviously not compatible with each other: according to Franks and Pariser, 'bare' DDC's are not grammatical in Russian; according to Marušič and Žaucer, they are licensed only in DE contexts; and according to Fici and Gerritsen, they are grammatical without any special licensing context. The ability to evaluate these proposals is complicated by the fact that actual examples of use of 'bare' DDC's (in all kinds of environments) can be found online and in the Russian National Corpus, as demonstrated in (8)-(11) above. However, such uses could be instances of contextually licensed ellipsis or "sloppy speech"; the examples above are taken mostly from blogs, which frequently include informal or innovative use of language. Therefore, it is not clear whether these examples actually have a grammatical status similar to the uncontroversial cases with negation or adverbs, which are accepted by all speakers.

An additional type of the DDC, which has received almost no attention in the literature, is illustrated in (12) and (13) below. These are examples of a DDC with a null subject that is interpreted as an 'arbitrary human'.⁴

⁴ In addition to the 'arbitrary human' null subject, the Russian DDC allows a *definite implicit argument*, as shown in (i). Such implicit arguments are always recoverable from the context and understood as having a specific referent, usually a speech act participant; Franks (1995) considers them a case of discourse ellipsis. Since such implicit arguments are generally available in place of subjects (and direct objects) in pragmatically motivated contexts in Russian and are not particular to the DDC, I do not discuss them here.

i. *Postavila budil'nik na šest'. Legla, postaralas' zasnut'- ne spitsja.*
set_{PAST.Sg.FEM} alarm on six lay_{PAST.Sg.FEM} try_{PAST.Sg.FEM} fall_{INF} asleep NEG sleep_{PRESENT.3Sg-SJA}
'[I] set the alarm to six. [I] lay down, tried to fall asleep- [I] can't sleep.'

(From the Russian National Corpus: <http://www.ruscorpora.ru>)

12. *Italija menja očēn' vdoxnovljaet. Zdes' xorošo tancujetsja.*

Italy_{NOM} I_{ACC} very inspire_{PRESENT.3Sg} here well dance_{PRESENT.3Sg}-SJA

'Italy inspires me very much. One feels like dancing here. / One can dance here. / It's a good place for dancing.'

(From: <http://italia-ru.com/blog/inna7>, 2012)

13. *Pod kakije treki xorošo begajetsja?*

under which tracks well run_{PRESENT.3Sg}-SJA

'With which [music] tracks does one feel like jogging?' / 'With which [music] tracks can one jog well?' / 'Which [music] tracks are good for jogging?'

(From: <http://irc.lv/gna>)

These null subject DDC sentences typically involve an adverb and a locative phrase (though other types of adjunct phrases are also possible, e.g. (13) above). Since they are barely mentioned in the literature, their grammatical status is also not clear; it is also not clear whether they are possible only with an adverb or also with negation.

The questions regarding the acceptability of different DDC types cannot be resolved based on authors' intuitions or isolated examples, since these practices have led to contradictory conclusions in the existing literature. Therefore, a more objective method is used here to shed light on this issue: a survey of judgments obtained from a large number of native speakers. The following section presents the survey's findings and discusses them. A comprehensive description of the method and the results is found in Chapter 5.

2.2.2 Questionnaire I: Findings and Discussion

Findings

The goal of this survey was to compare acceptability ratings of six DDC types: negated DDC, adverbial DDC, negated DDC with a null subject, adverbial DDC with a null subject, 'bare' DDC, and Yes/No question DDC (the latter represents a 'bare' DDC in a downward entailing context). These six DDC types are referred to as experimental conditions A-F, as shown in (14) below. The informants were asked to rate the acceptability of sentences including these conditions on a scale of 1-5.

14. The experimental conditions:

Condition	DDC type	Example
A	negated DDC	<i>Mne segodnja ne tancujetsja.</i> I _{DAT} today NEG dance _{PRESENT.3Sg} -SJA
B	adverbial DDC	<i>Mne segodnja xorošo tancujetsja.</i> I _{DAT} today well dance _{PRESENT.3Sg} -SJA
C	'bare' DDC	<i>Mne segodnja tancujetsja.</i> I _{DAT} today dance _{PRESENT.3Sg} -SJA
D	Yes/No question DDC	<i>Tebe segodnja tancujetsja?</i> you _{DAT} today dance _{PRESENT.3Sg} -SJA
E	negated DDC with a null subject	<i>Zdes' ne tancujetsja.</i> here NEG dance _{PRESENT.3Sg} -SJA
F	adverbial DDC with a null subject	<i>Zdes' xorošo tancujetsja.</i> here well dance _{PRESENT.3Sg} -SJA

The survey revealed that conditions A, B, and F (the negated DDC, the adverbial DDC, and the null-subject adverbial DDC, respectively) are perceived by native speakers as grammatical; these DDC types received a median score of 4 or higher on a 1-5 acceptability scale. Condition C (the 'bare' DDC) was judged by speakers as ungrammatical; this DDC type received a median rating of 2.5. Conditions D and E (the Yes/No question DDC and the null-subject negated DDC) received a median score of 3, which is the middle value of the response scale; analysis of the results (see Chapter 5) suggests that speakers do not have clear and consistent judgments when presented with sentences of these types; it is clear, however, that these conditions are different from both the grammatical conditions A, B, and F and the ungrammatical condition C.

Discussion

The fact that the negated DDC and the adverbial DDC turned out acceptable is not surprising. As mentioned above, there is general consensus in the literature that these two DDC types are possible in Russian, and the results of the survey confirm this view.

The most important outcome of the survey is that the 'bare' DDC was judged as ungrammatical. This result contributes novel empirical evidence to a highly controversial issue in the existing literature. Although examples of use of 'bare' DDC's can be found in corpora (as illustrated in section 2.2.1 above), it is clear from the results of the survey that this DDC type does not have the same grammatical status as the 'canonical' variants of the construction, which include negation or an adverb. This means that an adequate analysis of the Russian DDC has to account for the fact that the presence of the adverb or the negation is mandatory in the construction. These elements are optional in the basic derivation (for

example, *Ja rabotaju* (*I_{NOM} work_{PRESENT.1Sg}*) ‘I’m working’ is of course perfectly grammatical), so their obligatory status in the DDC must indicate that they have a crucial role in this alternate. In addition, other Slavic languages, e.g. Slovenian and Bulgarian, do allow ‘bare’ DDC’s, as shown in examples (15) and (16) below.

15. *Gabru se pleše.* (Slovenian)

Gaber_{DAT} SE dance_{PRESENT.3Sg}

‘Gaber feels like dancing’

Marušič and Žaucer 2006, p.1095, (2)

16. *Raboti mi se.* (Bulgarian)

work_{PRESENT.3Sg} I_{DAT} SE

‘I feel like working’

Rivero and Milojević Sheppard 2003, p.148, fn.8

This difference between the Russian variant of the construction and its counterparts in other Slavic languages must also be taken into account and addressed as part of an adequate analysis. These issues, i.e. the role of the adverb and the negation in the construction and the difference between the Russian DDC and its counterparts in other Slavic languages, are discussed in Chapter 4.

As to the ‘null subject’ DDC, the results show that at least the adverbial variant is acceptable. The availability of a null arbitrary element in place of the Dative phrase might be important both for an analysis of the construction and for broader issues in Russian grammar.⁵ A comprehensive discussion of the null-subject DDC and related issues is beyond the scope of this paper, and is therefore left for future research. Further investigation of this structure should check whether the null element is present syntactically, or only in the semantics; moreover, it should address the question why the status of the negated version of the null-subject DDC is different from that of the adverbial version.

Since the status of the Yes/No question DDC and the null-subject negated DDC is different from both the grammatical and the ungrammatical types, I do not discuss them further. The question why speakers do not have clear and consistent judgments regarding these structures remains open (some possible reasons are discussed in Chapter 5). Further research into the licensing environments of the DDC should investigate the status of ‘bare’ DDC’s in additional downward entailing environments which were not

⁵ For example, it shows that null arbitrary subjects can appear with impersonal verbs in Russian. This is in addition to the widely known cases of null arbitrary subjects with personal verbs (see Franks (1995)): (i) the proverbial 2nd person singular null subject (e.g. *tiše edeš, dal’še budeš* ‘the slower (you) go, the further (you) get’), and (ii) the arbitrary 3rd person plural null subject (e.g. *v Amerike govorjat po-anglijski* ‘in America (they) speak English’).

included in the current study, such as relative clauses in the restrictor of universal quantifiers and antecedents of conditionals.

2.3 Possible Meanings

2.3.1 Controversy in the Literature

In the literature on the Russian DDC, at least four types of meanings are associated with the construction; these meanings are presented as (i)-(iv) in the examples below. The controversy among the authors revolves around the question which of these meanings are actually available for the construction, as well as the question which types of the construction are associated with which interpretations.

17. *Mne ne rabotaetsja.*

I_{DAT} NEG work_{PRESENT.3SG}-SJA

(i) *Disposition*: 'I don't feel like working' / 'I'm not in a working mood'

(ii) *Capability*: 'I can't work'

(iii) *Evaluation of the activity*: 'I feel that my work is going badly'

(iv) *Evaluation of the participant's mental state*: 'I am working and not enjoying it' / 'I am working and (cannot help) feeling bad about it'

18. *Mne xorošo rabotajetsja.*

I_{DAT} well work_{PRESENT.3SG}-SJA

(i) *Disposition*: 'I feel like working' / 'I'm in a working mood'

(ii) *Capability*: 'I can work' / 'I can work well'

(iii) *Evaluation of the activity*: 'I feel that my work is going well'

(iv) *Evaluation of the participant's mental state*: 'I am working and enjoying it' / 'I am working and (cannot help) feeling good about it'

The first controversy revolves around *factuality* entailments in the construction; while meanings (iii) and (iv) in the examples above involve an actual event of working that happens in the real world, meanings (i) and (ii) do not entail such an event. Rivero and Arregui (2012) argue that there are two variants of the DDC in the Slavic languages, which differ from each other with regard to the factuality feature. In Russian and West Slavic languages (e.g. Polish, Czech, Slovak), the construction describes an involuntary mental state regarding an actual eventuality; specifically, they offer meaning (iv) above (e.g. 'I am working and cannot help feeling good about it') as the interpretation of the DDC in Russian and West Slavic. In South Slavic (e.g. Slovenian, Bulgarian, Serbian/Croatian), on the other hand, the construction

has a 'feel like' interpretation (meaning (i) above) and does not imply an actual eventuality. They further claim that the two types of meanings fail to coexist in one language, meaning that the Russian and West Slavic DDC cannot have the 'feel like' interpretation (except in the special case of negation, as mentioned below). Other authors, on the other hand, do not consider the Russian DDC as necessarily factual; Franks (1995) and Benedicto (1995), for example, attribute the non-factual meanings (i) and (ii) to both the adverbial and the negated types of the construction.

An additional controversy revolves around the role of negation in the DDC. According to Fici (unknown), a DDC with negation is ambiguous: it can be understood as synonymous to a DDC with a negative adverb (e.g. *ploxo* 'badly'), but it can also have the dispositional 'feel like' interpretation which is argued not to be available for the adverbial type. Similarly, Marušič and Žaucer (2006) claim that the dispositional meaning (i) is not available for the adverbial DDC, but rather is restricted to downward entailing environments, including negation. Rivero and Arregui (2012) also mention negation as having "intriguing effects" on the Russian DDC; specifically, it can cancel out the factuality of the construction and introduce a dispositional interpretation. However, Slobodchikoff (2008) promotes the completely opposite view; according to her, the negated DDC (which is the only type she discusses) does not have a dispositional interpretation, but rather always receives the capability interpretation (see meaning (ii) above).

The capability meaning is also discussed by Marušič and Žaucer (2006), Benedicto (1995), and Pariser (1982); under their analyses, this meaning is attributed to both the negated and the adverbial types of the construction. However, there is disagreement regarding the interpretation of the capability.

According to Benedicto (1995), the DDC is specialized for psychological circumstances; this means that sentence (17) above, expressing one's inability to work, can only be uttered in a situation in which the reasons for the inability have to do with one's mental state, and it cannot be used when the reasons are of a different kind (physical, external, etc.). In contrast, Pariser (1982) thinks that the capability / incapability can be understood as arising from any circumstances outside of one's own control, including external ones (e.g. environmental conditions).

To sum up, the main unresolved questions regarding the interpretation of the Russian DDC are as follows:

- Does it necessarily involve a factual eventuality (meanings (iii) and (iv)) or can it carry meanings that do not entail actual events (meanings (i) and (ii))?
- Does the negated construction have interpretations that are not available for the adverbial construction (e.g. meaning (i)), or is it synonymous to the adverbial DDC with a negative adverb?

- Is the DDC specialized for psychological circumstances?

In the following section, the findings of a survey designed to shed light on these questions are presented and discussed. A comprehensive description of the method and the results is found in Chapter 5.

2.3.2 Questionnaire II: Findings and Discussion

Findings

The goal of this survey was to compare the appropriateness ratings for the five meanings presented in (19) below. These are the meanings (i)-(iv) discussed in the previous section, but with the capability interpretation split into two kinds of circumstances: psychological ones (condition C) and physical/external ones (condition B). The survey checked the availability of these meanings in the two canonical DDC types: the negated DDC and the adverbial DDC.

19. Putative DDC meanings:

	Putative DDC meaning
A	disposition ('feel like')
B	capability (due to external / physical circumstances)
C	capability (due to psychological circumstances)
D	evaluation of the activity
E	evaluation of the participant's mental state

To elicit judgments regarding the availability of a meaning in a DDC sentence, the following format of questions was used. The informant was directed towards the intended meaning with a short context and a paraphrase; this was followed by a DDC utterance and the task: the informant had to rate (on a scale of 1-5) the appropriateness of using the given DDC sentence to express the intended meaning in the given situation. An example is shown in (20).

20. An example of a question checking the availability of **meaning B** in a **negated DDC**:

Context	Grandma has poor eyesight. She wanted to read the newspaper, but her eyes immediately got tired and she stopped reading after the first paragraph.
Paraphrase	Grandma wants to say that <i>she cannot read today</i> . She says:
Utterance	<i>Mne segodnja ne čitaetsja.</i> I _{DAT} today NEG read _{PRESENT.3Sg} -SJA
Task	Your task is to determine whether the sentence " <i>Mne segodnja ne čitaetsja</i> " is appropriate for this situation and expresses the meaning that grandma intends. Mark (1) if you think that the sentence is absolutely inappropriate for the situation and/or does not express what the person wants to say. Mark (5) if you think that the sentence is absolutely natural in this situation and expresses exactly what the person wants to say. If

	your judgment about the sentence is somewhere between these extremes, mark one of the middle responses (2), (3), or (4).
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The results of the survey reveal that both the negated DDC and the adverbial DDC are appropriate to express the meanings A, C, and D (disposition, capability (psychological), and evaluation of the activity, respectively); these experimental conditions received a median score of 4 or higher on a 1-5 scale. Both the negated DDC and the adverbial DDC cannot express meaning B (capability due to physical/external circumstances); these conditions received the median rating 2. As for meaning E (evaluation of the participant's mental state), both DDC types received the median score 3, the middle value of the response scale; analysis of the results (see Chapter 5) suggests that the informants responded randomly to sentences from these experimental conditions, meaning that they did not have clear and consistent judgments regarding the availability of this meaning in the DDC.

Discussion

The results of this survey contribute important insights to the controversial issues presented in section 2.3.1 above. First, it turns out that the same meanings are available for the negated DDC and the adverbial DDC with *ploxoxo* 'badly'. This finding has consequences for the analyses of Fici (unknown), Marušič and Žaucer (2006), and Rivero and Arregui (2012), who claim that the dispositional meaning is restricted to the negated DDC.

Furthermore, the availability of the dispositional meaning and the capability meaning for both DDC types serves as counter-evidence to Rivero and Arregui's (2012) claim that the Russian DDC is necessarily factual. It seems that the DDC allows both factual interpretations (e.g. 'I feel that my work is going badly') and non-factual ones (e.g. 'I don't feel like working', 'I can't work'); thus, factual and non-factual (adverbial) DDC's do coexist in one language, contra Rivero and Arregui 2012.

The results also provide a clear answer regarding the type of circumstances involved in the interpretation of the construction; the DDC is appropriate to express (in-)capability due to psychological circumstances, but it cannot express (in-)capability due to physical or external reasons. These findings strongly support Benedicto's (1995) proposal that the DDC is specialized for psychological circumstances. This means that the English translation that uses the modal 'can' (e.g. 'I can't work') is not adequate to express the type of capability expressed by the Russian DDC. Rather, the capability expressed by the DDC is almost synonymous to the dispositional meaning, since it necessarily involves a mood or desire to perform the activity.

To sum up, the meanings associated by speakers with the Russian DDC are as following:

21. ***Mne ne / ploxo rabotaetsja.***

I_{DAT} NEG / badly work_{PRESENT.3SG-SJA}

(i) *Disposition*: 'I don't feel like working' / 'I'm not in a working mood'

(ii) *Capability*: 'I can't work due to my psychological circumstances'

(iii) *Evaluation of the activity*: 'I feel that my work is going badly'

The interpretation of the construction is discussed further in section 4.4 below.

3. The Input for DDC Formation

In the previous chapter, the structural and semantic characteristics of the DDC were described. In order to propose an analysis that accounts for these properties, we next turn to look into the DDC formation process. This chapter is concerned with the input for the formation, i.e. the verbs that participate in the DDC alternation. The commonly accepted view, presented in section 3.1, is that the Russian DDC is formed from unergative verbs, namely intransitives with an external argument. In section 3.2, I argue that this definition of the input is not accurate, and present some counterexamples. In section 3.3, a revised definition of the input for DDC formation is offered.

3.1 The Existing Definition of the Input

The Russian DDC is more restricted than its counterparts in other Slavic languages in the choice of verbs that can participate in the construction. It has been generally observed in the literature (e.g. Schoorlemmer 1993, Franks 1995) that the Russian DDC does not allow realization of internal arguments, thus excluding transitive verbs from the construction. This stands in contrast to languages such as Slovenian, Polish and Bulgarian, among others, in which in addition to the Dative noun phrase, the internal argument of a verb can be realized in the DDC with either ACC or NOM case.⁶ This is demonstrated below in Slovenian (22a) and Bulgarian (23a); both examples are taken from Rivero and Milojević Sheppard 2003. The parallel sentences in Russian are ungrammatical, as shown in (22b) and (23b); the Russian verbs *jest'* (eat) and *čitat'* (read) can participate in the DDC only if their internal argument is not realized, as in (22c) and (23c).⁷ Transitive verbs whose internal argument is not optional, like *stroit'* (build) cannot participate in the Russian DDC at all, as shown in (24b).

⁶ The variant with the ACC noun phrase is considered the 'active' variant, while the variant with the NOM noun phrase is the 'passive' one (see Rivero and Milojević Sheppard 2003, Marušič and Žaucer 2006). Some languages (e.g. Slovenian) have both variants, while other languages (e.g. Serbian/Croatian and Bulgarian) have only the passive one (Rivero and Milojević Sheppard 2003, Marušič and Žaucer 2006).

⁷ There are some examples I found online in which the verb *pit'* (drink) realizes its internal argument in the DDC, as in (i) below (it is not clear in this example whether the internal argument is NOM or ACC, since the morphology is identical for this type of noun). This seems to be restricted to this specific verb (based on searches online and in the Russian National Corpus), and I regard it as an isolated exception to a strong generalization.

i. **V žaru mne xorošo p'jotsja zeljonyj čaj.**
in heat I_{DAT} well drink_{PRESENT.3SG-SJA} green tea
'When it's hot, I feel like drinking green tea' / 'When it's hot, I enjoy drinking green tea'

(From: <http://kuking.net>)

22. (a) **Danes dopoldne se mi je jedlo jagode.** (Slovenian)
 today morning SE I_{DAT} be_{3SG} eat_{NEU} strawberries_{ACC}
 ‘This morning I felt like eating strawberries’
- (b) ***Mne včera (ne) jelos’ klubniku.**
 I_{DAT} yesterday NEG eat_{PAST.Sg.NEU-SJA} strawberries_{ACC}
- (c) **Mne včera ne jelos’.**
 I_{DAT} yesterday NEG eat_{PAST.Sg.NEU-SJA}
 ‘I didn’t feel like eating yesterday’ / ‘I couldn’t eat yesterday’
23. (a) **Četjaxa mi se knigi.** (Bulgarian)
 read_{PAST.3PI} I_{DAT} SE books_{NOM}
 ‘I felt like reading books’
- (b) ***Mne (ne) čitalis’ knigi.**
 I_{DAT} NEG read_{PAST.PI-SJA} books_{NOM}
- (c) **Mne včera ne čitalos’.**
 I_{DAT} yesterday NEG read_{PAST.Sg.NEU-SJA}
 ‘I didn’t feel like reading yesterday’ / ‘I couldn’t read yesterday’ / ‘I felt that my reading was going badly yesterday’
24. (a) **Ja stroju *(dom).**
 I_{NOM} build_{PRESENT.1Sg} house
 ‘I’m building a house’
- (b) ***Mne ne stroitsja (dom).**
 I_{DAT} NEG build_{PRESENT.3Sg-SJA} house

Franks (1995) notes that not only direct objects but also prepositional arguments are excluded from the Russian construction (see (25a)), as opposed to non-argument prepositional phrases (see (25b)). Therefore, he concludes that “a Russian verb may not enter into the... construction if it has any internal arguments” (p. 365).

25. (a) ***Mne ne rabotajetsja nad etoj zadačej.**
 I_{DAT} NEG work_{PRESENT.3Sg-SJA} on this problem
 Intended: ‘I don’t feel like working on this problem’ / ‘I can’t work on this problem’

Franks 1995, p.365, (64a)

(b) **Mne ne rabotaetsja pri takix uslovijax.**

I_{DAT} NEG work_{PRESENT.3Sg}-SJA under such conditions

'I don't feel like working under such conditions' / 'I can't work under such conditions' / 'I feel that my work is going badly under such conditions'

Franks 1995, p.366, (68a)

The ban on internal arguments is not limited to direct and indirect objects. Schoorlemmer (1993) shows that intransitive unaccusative verbs, whose subject is claimed to be an internal argument, are not admissible in the construction as well, as shown in (26).⁸ Therefore, she concludes that Russian DDC formation is "productive for all unergative intransitive verbs" (p.155), i.e. for one-place verbs with an externally mapped argument.

26. (a) ***Vase ne rastetsja.**

Vasja_{DAT} NEG grow_{PRESENT.3Sg}-SJA

Intended: 'Vasja doesn't feel like growing up' / 'Vasja can't grow up'

Schoorlemmer 1993, p.158, (48b)

(b) ***Vase ne padaetsja.**

Vasja_{DAT} NEG fall_{PRESENT.3Sg}-SJA

Intended: 'Vasja doesn't feel like falling' / 'Vasja can't fall'

Though the observations that the Russian DDC allows only one argument and that this argument cannot be internal are indeed correct, I will show that a definition of the set of verbs participating in the DDC as unergatives is not accurate. More specifically, not all intransitives with an external argument take part in the construction, but rather a subset of them, which is defined by the type of theta-role the external argument bears.

3.2 Counterexamples to the Existing Definition of the Input

The best evidence that not all unergatives can serve as input for the DDC formation comes from the class of emission verbs (see Levin and Rappaport-Hovav 1995, Reinhart 2002, Potashnik 2012). These verbs are described in the literature as non-agentive unergatives, which express non-voluntary emission of sound, light, smell or substance. Some Russian examples are: *zvonit'* (ring), *gremet'* (thunder, rattle), *vizžat'* (squeal), *svistet'* (whistle), *potet'* (sweat), *vonjat'* (stink), *drožat'* (tremble), *sverkat'* (sparkle), *blestet'* (shine), *cvesti* (bloom), etc. Crosslinguistic evidence strongly suggests that emission verbs are

⁸ Diagnostics showing that the verbs *rastit'* (grow) and *padat'* (fall) are unaccusative are presented in examples (29)-(30) below.

unergative; they systematically fail unaccusativity diagnostics, similarly to agentive unergative verbs.⁹ In Russian, this can be demonstrated with the Genitive of Negation diagnostic, proposed by Pesetsky (1982); genitive of negation can appear on direct objects (27b), subjects of passives (28b), and subjects on unaccusatives (29b) and (30b), but not on subjects of transitives (31b) or subjects of agentive unergatives (32b). Therefore, the generalization is that the genitive of negation is possible only on internal arguments. As shown in (33b) and (34b) below, the subject of emission verbs cannot show the genitive of negation, pairing with subjects of transitive and unergative verbs.

Direct Object:

27. (a) **Ja ne polučila pis'ma.**
 I_{NOM} NEG receive_{PAST.Sg.FEM} letters_{ACC}
 'I did not receive (the) letters'

(b) **Ja ne polučila pisem.**
 I_{NOM} NEG receive_{PAST.Sg.FEM} letters_{GEN}
 'I did not receive (the) letters'

Subject of Passive:

28. (a) **Ni odin dom ne byl postrojen.**
 not one house_{NOM.MASC} NEG was_{MASC.Sg} built_{MASC.Sg}
 'Not a single house was built'

(b) **Ni odnogo doma ne bylo postrojeno.**
 not one house_{GEN.MASC} NEG was_{NEU.Sg} built_{NEU.Sg}
 'Not a single house was built'

Subject of Unaccusative:

29. (a) **Ni odin grib zdes' ne rastet.**
 not single mushroom_{NOM} here NEG grow_{PRESENT.3Sg}
 'Not a single mushroom grows here'

(b) **Ni odnogo griba zdes' ne rastet.**
 not single mushroom_{GEN} here NEG grow_{PRESENT.3Sg}
 'Not a single mushroom grows here'

⁹ See Potashnik 2012 for a summary of evidence from English, Italian, Dutch, and Hebrew.

30. (a) **Ni** **odin** **listok** **ne** **upal.**
 not one leaf_{NOM.MASC} NEG fall_{PAST.Sg.MASC.PERF}
 'Not a single leaf fell'

(b) **Ni** **odnogo** **listka** **ne** **upalo.**
 not one house_{GEN.MASC} NEG fall_{PAST.Sg.NEU.PERF}
 'Not a single leaf fell'

Subject of Transitive:

31. (a) **Ni** **odin** **mal'čik** **ne** **polučil** **naše** **pis'mo.**
 not one boy_{NOM.MASC} NEG receive_{PAST.Sg.MASC} our letter_{ACC}
 'Not a single boy received our letter'

(b) ***Ni** **odnogo** **mal'čika** **ne** **polučilo** **naše** **pis'mo.**
 not one boy_{GEN.MASC} NEG receive_{PAST.Sg.NEU} our letter_{ACC}

Subject of Unergative:

32. (a) **Ni** **odin** **mal'čik** **ne** **prygal.**
 not one boy_{NOM.MASC} NEG jump_{PAST.Sg.MASC}
 'Not a single boy jumped'

(b) ***Ni** **odnogo** **mal'čika** **ne** **prygalo.**
 not one boy_{GEN.MASC} NEG jump_{PAST.Sg.NEU}

Subject of Emission verb:

33. (a) **Ni** **odin** **telefon** **ne** **zvonil.**
 not one phone_{NOM.MASC} NEG ring_{PAST.Sg.MASC}
 'Not a single phone rang'

(b) ***Ni** **odnogo** **telefona** **ne** **zvonilo.**
 not one phone_{GEN.MASC} NEG ring_{PAST.Sg.NEU}

34. (a) **Ni** **odin** **cvetok** **zdes'** **ne** **cvetet.**
 not single flower_{NOM} here NEG blossom_{PRESENT.3Sg}
 'Not a single flower blossoms here'

(b) ***Ni** **odnogo** **cvetka** **zdes'** **ne** **cvetet.**
 not single flower_{GEN} here NEG blossom_{PRESENT.3Sg}
 'Not a single flower blossoms here'

The diagnostic confirms that Russian emission verbs are unergative, meaning that their argument is external. Under the existing definition of the set of verbs admissible in the DDC, they are predicted to participate in the construction. This is not the case, however, as demonstrated by the following ungrammatical examples:

35. (a) ***Vase** **ne** **poteetsja.**
 Vasja_{DAT} NEG sweat_{PRESENT.3Sg}-SJA
 Intended: ‘Vasja doesn’t feel like sweating’ / ‘Vasja can’t sweat’

(b) ***Vase** **ne** **vonjaetsja.**
 Vasja_{DAT} NEG stink_{PRESENT.3Sg}-SJA
 Intended: ‘Vasja doesn’t feel like stinking’ / ‘Vasja can’t stink’

(c) ***Vase** **ne** **cvetetsja.**
 Vasja_{DAT} NEG blossom_{PRESENT.3Sg}-SJA
 Intended: ‘Vasja doesn’t feel like blossoming’ / ‘Vasja can’t blossom’

The crucial difference between emission verbs and unergatives that do participate in the DDC (e.g. *rabotat* ‘work’) seems to be their argument structure. As mentioned above, emission verbs are ‘non-agentive’, and this property seems to exclude them from being a suitable input for DDC formation.¹⁰ In addition to emission verbs, there are other types of intransitive verbs that do not participate in the DDC alternation despite having an external argument: reflexives, reciprocals, and Subject-Experiencer psych verbs. In the following examples, the (b) sentences show that the subjects of such verbs cannot bear the genitive of negation (but only nominative, as in the (a) examples), meaning that the derivation is unergative.¹¹ The (c) sentences show that these verbs do not participate in the DDC.

Reflexives:

36. (a) **Ni** **odin** **malčik** **včera** **ne** **kupalsja.**
 not single boy_{NOM.MASC} yesterday NEG wash_{PAST.Sg.MASC}-SJA
 ‘Not a single boy showered yesterday’

(b) ***Ni** **odnogo** **malčika** **včera** **ne** **kupalos’.**
 not single boy_{GEN.MASC} yesterday NEG wash_{PAST.Sg.NEU}-SJA

¹⁰ Two specific proposals regarding the theta-role that the subject of emission verbs realizes are presented in the next section.

¹¹ For arguments in favor of an unergative derivation for these classes of verbs in other languages see Reinhart and Siloni 2005 (for reflexives), Siloni 2012 (for reciprocals), Reinhart 2000 (for Subj-Exp verbs).

(c) ***Mne včera ne kupalos’.**

I_{DAT} yesterday NEG wash_{PAST.Sg.NEU-SJA}

Intended: ‘I didn’t feel like showering yesterday’ / ‘I couldn’t shower yesterday’

Reciprocals:

37. (a) **Ni odna para ne celovalas’.**

not single couple_{NOM.FEM} NEG kiss_{PAST.Sg.FEM-SJA}

‘Not a single couple kissed’

(b) ***Ni odnoj pary ne celovalos’.**

not single couple_{GEN.FEM} NEG kiss_{PAST.Sg.NEU-SJA}

(c) ***Nam ne celovalos’.**

we_{DAT} NEG kiss_{PAST.Sg.NEU-SJA}

Intended: ‘We didn’t feel like kissing’ / ‘We couldn’t kiss’

Subject-Experiencer Psych Verbs:

38. (a) **Ni odin ministr ne volnovalsja.**

not single minister_{NOM.MASC} NEG worry_{PAST.Sg.MASC-SJA}

‘Not a single minister worried’

(b) ***Ni odnogo ministra ne volnovalos’.**

not single minister_{GEN.MASC} NEG worry_{PAST.Sg.NEU-SJA}

(c) ***Mne ne volnovalos’.**

I_{DAT} NEG worry_{PAST.Sg.NEU-SJA}

Intended: ‘I didn’t feel like worrying’ / ‘I couldn’t worry’

There seem to be two possible explanations for the exclusion of these types of verbs from the DDC; the first one is that they are ruled out by a morphological rule, and the second one is that they do not have the ‘right’ argument structure, similarly to emission verbs. The morphological explanation has to do with –SJA affixation: DDC formation obligatorily involves marking the verb with –SJA, but reflexive, reciprocal and Subj-Exp verbs are usually already marked with this morphology (see the (a) examples above).

Therefore, a morphological rule banning a double –SJA affixation might be the reason these verbs are excluded from the DDC. This explanation is supported by the fact that the verbs *ulybat’sja* (smile) and *smejat’sja* (laugh) do not participate in the DDC despite being agentive unergatives.¹² These verbs have a –SJA suffix as part of their basic form (i.e. they do not have an alternate without –SJA), and their

¹² More precisely, they are argued (Reinhart 2002) to belong to the same thematic class as *spat’* (sleep), which does participate in the DDC, as discussed in the following section.

exclusion from the DDC could be related to this fact.¹³ However, I tend to think that the morphological restriction is not the only factor involved in the exclusion of reflexive, reciprocal, and Subject-Experiencer verbs. There are a few verbs that thematically belong to one of these classes, but are not affixed with –SJA, such as the reciprocals *besedovat'* (converse) and *sporit'* (argue). These verbs are not subject to the putative morphological restriction, but they are nonetheless excluded from the DDC, as shown below. The reason might be that similarly to the –SJA marked reciprocals, their argument structure is not suitable to serve as input for DDC formation.

39. (a) **My včera ne besedovali.**
 we_{NOM} yesterday NEG converse_{PAST.PI}
 'We didn't converse (with each other) yesterday'

(b) ***Nam včera ne besedovalos'.**
 we_{DAT} yesterday NEG converse_{PAST.Sg.NEU-SJA}
 Intended: 'We didn't feel like conversing yesterday' / 'We couldn't converse yesterday'

40. (a) **My včera ne sporili.**
 we_{NOM} yesterday NEG argue_{PAST.PI}
 'We didn't argue (with each other) yesterday'

(b) ***Nam včera ne sporilos'.**
 we_{DAT} yesterday NEG argue_{PAST.Sg.NEU-SJA}
 Intended: 'We didn't feel like arguing yesterday' / 'We couldn't argue yesterday'

To sum up, the fact that emission verbs, reflexives, reciprocals, and Subject-Experiencer verbs do not participate in the DDC leads to the conclusion that the input for the DDC formation is *not* the set of unergative verbs, as has been claimed in the literature. An alternative definition of the set is proposed in the following section.

¹³ It should be noted that examples of DDC's with *ulybat'sja* (smile) and *smejat'sja* (laugh) can be found online (see (i) below), which suggests that the morphological restriction can be disregarded in informal speech (in which case no –SJA is added to the already suffixed verb). However, I did not find any examples of DDC's with reflexives, reciprocals, or Subj-Exp verbs, which suggests that they are excluded for additional reasons (as discussed in the text).

i. **Zdes' mne legko smejotsja i dyšitsja.**
 here I_{DAT} easily laugh_{PRESENT.3Sg} and breathe_{PRESENT.3Sg-SJA}
 'I feel that here I can laugh easily and breathe easily'

3.3 Redefining the Input for DDC Formation

3.3.1 Verbs Admissible in the DDC

There are three types of verbs found in the Russian DDC: intransitives with an Agent argument, intransitives with an argument that is interpreted either as an Agent or an Experiencer, and object-drop transitives with an Agent argument.

The first type includes verbs such as *rabotat'* (work), *begat'* (run), *guljat'* (stroll), *xodit'* (walk), *plavat'* (swim), *prygat'* (jump), *šutit'* (joke), *pet'* (sing), *tancevat'* (dance), *pljasat'* (dance). (41a) and (41b) below show examples of such verbs in the basic derivation and the DDC alternate, respectively.

41. (a) **Ja guljaju (v parke).**

I_{NOM} stroll_{PRESENT.1Sg} in park

'I am walking around (in the park)'

(b) **Na ulice doždi i xolod, tak čto mne ne guljaetsja.**

on street rains and cold so I_{DAT} NEG stroll_{PRESENT.3Sg-SJA}

'It's rainy and cold on the street, so I don't feel like walking around'

(From: <http://golodanie.su/forum/archive/index.php/t-12087.html>, 2011)

In the basic derivation, e.g. (41a), these verbs denote activities, and their argument realizes the Agent theta-role, meaning that it is a human (or animate) entity, perceived as volitionally causing the eventuality described by the verb. It is widely accepted that this argument is mapped externally (i.e. the derivation is unergative), as illustrated with the Genitive of Negation diagnostic in (32) above.

The second type includes intransitives such as *spat'* (sleep), *sidet'* (sit), *ležat'* (lie down), *otdyxat'* (rest, be on vacation), *žit'* (live).

42. (a) **Včera ja ne spal.**

yesterday I_{NOM} NEG sleep_{PAST.Sg.MASC}

'I didn't sleep yesterday'

(b) **Nesmotrja na ustalost', mne ne spalos'.**

despite tiredness I_{DAT} NEG sleep_{PAST.Sg.NEU-SJA}

'Despite my tiredness, I could not sleep'

(Volkov (1988). From the Russian National Corpus: <http://www.ruscorpora.ru>)

These verbs denote physical states, and their argument is also necessarily animate; however, unlike the subject of agentive intransitives, this argument is not necessarily understood as causing the eventuality. In many contexts, it is most naturally understood as the Experiencer of the state described by the verb,

e.g. the state of being asleep in the sentence ‘*John was tired and now he is sleeping*’. In other contexts, however, this argument is understood as volitionally causing the eventuality, for example in ‘*John sleeps a lot in order to have energy for his football trainings*’. The basic derivation of such verbs is also unergative, as demonstrated by impossibility of their subject to appear in the genitive of negation:

43. (a) **Ni odin mal’čik ne spal.**
 not one boy_{NOM.MASC} NEG sleep_{PAST.Sg.MASC}
 ‘Not a single boy slept’
- (b) ***Ni odnogo mal’čika ne spalo.**
 not one boy_{GEN.MASC} NEG sleep_{PAST.Sg.NEU}

The third type of verbs admissible in the DDC is ‘object-drop’ transitive verbs, such as *pisat’* (write), *čitat’* (read), *kušat’* (eat), *jest’* (eat), *pit’* (drink). For example-

44. (a) **Ja čitaju (gazetu).**
 I_{NOM} read_{PRESENT.1Sg} newspaper_{ACC}
 ‘I am reading (a newspaper)’
- (b) **V samoljote mne xorošo čitajetsja.**
 in airplane I_{DAT} well read_{PRESENT.3Sg-SJA}
 ‘In airplanes, I feel like reading / I can read / I feel that my reading is going well’

(From: <http://motorka-lara.livejournal.com/53859.html>, 2009)

These are two-place predicates with the thematic structure of an Agent and a Theme, whose Theme role is optional (meaning that it can, but doesn’t have to be realized). As mentioned in section 3.1 above, these verbs can participate in the DDC only if the object is dropped. Agent-Theme transitives whose Theme is not optional are not admissible in the DDC (see (24) above). Other transitives whose object is not optional, such as Cause-Theme and Experiencer-Theme verbs (see examples in the table in (47) below) are also excluded from the DDC.

It is important to emphasize that the DDC is a productive construction, meaning that it allows neologisms, as illustrated in (45). The verbs used in (45) are relatively new in the language (they are derived from nouns or verbs borrowed from foreign languages); they can participate in the DDC because they belong to one of the classes mentioned above: *direktorstvovat’* (be a manager) is an Agent unergative, *improvizirovat’* (improvise) and *filosofstvovat’* (philosophize) are object-drop transitives.

45. (a) *Xorošo li emu direktorstvuetsja ?*

well QUEST he_{DAT} manage_{PRESENT.3Sg-SJA}

‘Does he feel that his managing job is going well?’

(b) *Segodnja kompozitoru čto-to ne improviziruetsja.*

today composer_{DAT} for some reason NEG improvise_{PRESENT.3Sg-SJA}

‘For some reason, the composer cannot improvise today / the composer doesn’t feel like improvising today / the composer’s improvising is going badly today’

(b) *Segodnja na seminare nam xorošo pofilosfstvovalos’.*

today on seminar we_{DAT} well PO-philosophize_{PRESENT.3Sg-SJA}

‘We feel that our philosophizing at the seminar today went well’

Gerritsen 1990, p.174-175, (262), (263), (265)

The following tables summarize the types of verbs that do and do not participate in the DDC:

46. Intransitive verbs:

Participate in the DDC		Do not participate in the DDC				
Agent Unergatives	Agent/ Exper. Unergatives	Unaccusatives	Unergatives			
			Emission Verbs	Subj-Experiencers	Reflexives	Reciprocals
<i>rabotat’</i> (work)	<i>spat’</i> (sleep)	<i>rasti</i> (grow)	<i>potet’</i> (sweat)	<i>volnovat’sja</i> (worry)	<i>myt’sja</i> (wash)	<i>obnimat’sja</i> (hug)
<i>begat’</i> (run)	<i>otdyxat’</i> (rest)	<i>padat’</i> (fall)	<i>vonjat’</i> (stink)	<i>udivljat’sja</i> (be surprised)	<i>brit’sja</i> (shave)	<i>vstrečat’sja</i> (meet)
<i>pet’</i> (sing)
...

47. Transitive verbs:

Participate in the DDC	Do not participate in the DDC		
Object-drop Agent-Theme Transitives	Agent-Theme Transitives	Cause-Theme Transitives	Experiencer-Theme Transitives
<i>pisat’</i> (write)	<i>stroit’</i> (build)	<i>otkryvat’</i> (open)	<i>ljubit’</i> (love)
<i>čitat’</i> (read)	<i>varit’</i> (cook)	<i>napolnjat’</i> (fill)	<i>nenavidit’</i> (hate)
<i>jest’</i> (eat)	<i>čistit’</i> (clean)	<i>razbivat’</i> (break)	<i>znat’</i> (know)
...

Regarding transitive verbs, the generalization is quite straightforward: only object-drop transitives are admissible in the construction. As mentioned in section 3.1 above, the Russian DDC cannot include internal arguments, so verbs that cannot drop their objects are excluded.

The situation with intransitive verbs seems more puzzling. As evident from the table in (46), the distinction between unergative and unaccusative intransitives is not helpful for defining the set of

admissible verbs, since both unaccusatives and some types of unergatives are excluded from the construction. Another option mentioned above is that intransitives with a specific type of theta-role are admissible, but an attempt to reach a generalization regarding the theta-role in question encounters a few problems. First, the Agent / Experiencer duality in the interpretation of the argument of verbs like *spat'* (sleep) cannot be straightforwardly expressed via the traditional theta-roles. Treating these verbs as agentive would be incorrect since in many (maybe most) instances their argument is understood as an Experiencer of the state described by the verb; treating them as having an Experiencer theta-role would raise the question what distinguishes them from Experiencer intransitives that do not participate, such as *volnovat'sja* (worry). In addition, it seems that reflexive and reciprocal verbs are also agentive intransitives, since their argument is perceived as volitionally causing the eventuality; therefore, it is not clear why they cannot participate in the DDC alongside other agentive intransitives.

To sum up, it seems impossible to define what distinguishes the type of intransitives participating in the alternation from the types that do not in terms of the traditional view under which the roles are treated as atomic primitives (Agent, Experiencer, etc.). In the next sections, I show that adopting an alternative theoretical framework, under which theta-roles are decomposable to clusters of features, resolves the problem and allows a straightforward definition of the input for the DDC formation.

3.3.2 The Theta System

The Theta System (Reinhart 2002, Everaert, Marelj, and Siloni 2012) enables the interface between the system of concepts and two other systems: the computational system (syntax), and (indirectly) the inference system (semantics). It determines the type of information relevant for argument structure, and proposes a way to formally code this information so that it is legible to syntax. The encoding includes definition of theta-relations on verbal entries via formal features, instead of the traditional theta-roles. This means that theta-role labels, such as Agent or Theme, are not viewed as primitives, but are rather decomposed to feature clusters. The clusters comprise two atomic binary features: *+/- C* (cause change) and *+/- M* (mental state). The feature clusters are passed on through the syntactic derivation and interact with the inference system. In interpretational terms, the feature *C* determines whether the argument is necessarily responsible for causing the event and the feature *M* determines whether the mental state of the argument is relevant to the event (i.e. whether the event involves volition and intention of the argument). Each feature can be valued positively, valued negatively, or unvalued, so some theta clusters are 'fully specified' (i.e. the value of both their features is defined), and

some clusters are ‘underspecified’ or ‘unary’ (i.e. the value of one of the features is not defined).¹⁴ The fully specified and the unary clusters are shown in (48) below. The clusters do not directly correspond to traditional theta-roles, and many of them have varying contextual interpretations, as explained below. The labels in (48) are presented for convenience, and they represent the role that each cluster is most typically associated with. The roles [-c], and [-m] are not relevant to the current study and I do not discuss them; the reader is referred to Reinhart 2002 and Everaert, Marelj, and Siloni 2012.

48. Theta-clusters:

	Label	Causes the denoted event (change)	Mental state (volition, intention) is relevant
Fully specified clusters:			
[+c+m]	Agent	Yes	Yes
[-c-m]	Theme	No	No
[+c-m]	Cause/Instrument	Yes	No
[-c+m]	Experiencer	No	Yes
Unary clusters:			
[+c]	Cause	Yes	undefined
[+m]	Sentient	undefined	Yes
[-c]	Goal, Benefactor	No	undefined
[-m]	Subject Matter, Target of Emotion	undefined	No

The unary clusters are undefined with respect to the value of one of their features and thus are compatible with both possible values. This allows them to have varying interpretations depending on the utterance they are realized in.¹⁵ For example, the difference between a [+c+m] (Agent) cluster and a [+c] (Cause) cluster is that the former necessarily involves volition and intention, which is expressed via a positive value of the *M* feature. So in verbs like *feed*, which have a [+c+m] cluster, this argument can only be realized as an animate entity: *The father / *the spoon / *the hunger fed the baby*. The [+c] cluster, on the other hand, is unspecified for mental state, and thus can be interpreted as an inanimate

¹⁴ The system also allows an ‘empty cluster’, which is undefined with respect to both features. The empty cluster [] is argued to have a role in lexical middles formation (Marelj 2004), light verbs (Ackema and Marelj 2012), and lexical reciprocal verbs (Siloni 2012). I do not elaborate further on this cluster, since it is not relevant to the current discussion. The reader is referred to the abovementioned literature.

¹⁵ Marelj (2004) proposes a principle of full interpretation which requires that at the level of interpretation all clusters be fully specified. This requirement is subject to the constraint banning the co-realization of two identical roles/clusters per predicate.

Cause (e.g. natural force), an Instrument, or an Agent, depending on the specific sentence, for example: *The storm / the stone / Max broke the window.*¹⁶

The [+m] cluster, labeled as Sentient in the Theta System, has not been identified as an independent role in other frameworks. Reinhart (2002) associates this cluster with the subject of verbs like *laugh, cry, sleep, see, hear, love, know, believe*, etc. The argument realizing a [+m] cluster is usually interpreted as an Experiencer, i.e. [-c+m], but the difference between a Sentient and an Experiencer is that the former, but not the latter, can be interpreted in some contexts as causing the eventuality, i.e. [+c+m]. In the previous section, I showed that Agent/Experiencer unergatives (such as *spat'* (sleep) and *sidet'* (sit)) participate in the DDC, while Experiencer unergatives (such as *volnovat'sja* (worry) and *udivljat'sja* (wonder)) do not. In the Theta System terms, the former are V[+m] verbs, while the latter are of the type V[-c+m]. It should be noted that Reinhart's (2002) arguments in favor of the distinction between these two sets are mainly theory internal (they involve Case and linking considerations); she mentions that semantically the [+m] role might be hard to distinguish from the [-c+m] role. However, Horvath and Siloni (2011) provide independent support for the distinction: they show that V[+m] verbs can serve as input for causativization in Hungarian, while verbs of the type V[-c+m] cannot (see Horvath and Siloni 2011, p. 688-689). The facts regarding the Russian DDC contribute additional independent evidence in favor of the distinction: as shown in the previous section, while V[+m] verbs can serve as input for DDC formation, V[-c+m] verbs cannot. This issue is discussed further in the next section.

One of the important properties of the Theta System is that the feature composition of the clusters gives rise to natural classes of verbs with regard to mapping. Clusters with positively valued features only ([+] clusters), i.e. Agent [+c+m], Sentient [+m], and Cause [+c], always merge externally. Clusters with negatively valued features only ([-] clusters), i.e. Theme [-c-m], Subject Matter [-m], and Goal [-c], always merge internally. The mixed clusters, Instrument [+c-m] and Experiencer [-c+m], are mapped externally in the absence of a [+] cluster, and internally when a [+] cluster is present. For example, consider the transitive / intransitive alternation in examples (a) and (b) below. In both cases, the transitive alternate in (a) involves a [+] cluster that merges externally.¹⁷ This [+] cluster is not present in the intransitive derivations in (b), which realize only the argument that was internal in the (a) sentences. The genitive of negation diagnostic in (c) shows that the mapping of the intransitive alternates is

¹⁶ Both an inanimate Cause and an Instrument correspond to a [+c-m] cluster; the difference between them is that an Instrument never causes the event by itself, but requires an explicit or implicit Agent (Reinhart 2002, Siloni 2002).

¹⁷ More specifically, this argument is claimed to realize a [+c] cluster, which can be reduced from the lexical entry by an operation called *decausativization*, which derives the intransitive entries in (b) (see Reinhart 2002, Everaert, Marelj, and Siloni 2012).

different: while the argument of the intransitive *razbit'sja* (break-SJA) is merged internally, the argument of the intransitive *udivit'sja* (surprise-SJA) is external.

49. (a) **Maša razbila okno.**
 Maša_{NOM} break_{PAST.SG.FEM} window_{ACC}
 'Masha broke the window'
- (b) **Okno razbilos'.**
 window_{NOM.NEU} break_{PAST.SG.NEU-SJA}
 'The window broke'
- (c) **Ni odnogo okna ne razbilos'.**
 not one window_{GEN.MASC} NEG break_{PAST.SG.NEU}
 'Not a single window broke'
50. (a) **Naše pis'mo udivilo Mašu.**
 our letter_{NOM.NEU} surprise_{PAST.SG.NEU} Maša_{ACC}
 'Our letter surprised Masha'
- (b) **Maša udivilas'.**
 Maša_{NOM} surprise_{PAST.SG.FEM-SJA}
 'Masha was surprised'
- (c) ***Ni odnogo vrača ne udivilos'.**
 not one doctor_{GEN.MASC} NEG surprise_{PAST.SG.NEU}

This difference in the mapping in the (b) examples is naturally explained by the cluster composition of the argument in each case. The argument of *razbit'sja* (break-SJA) realizes a [-c-m] cluster (Theme): it does not bring about the event and its mental state is irrelevant. Since it is a [-] cluster, it always merges internally. The argument of *udivit'sja* (surprise-SJA), on the other hand, is a mixed cluster [-c+m] (Experiencer); in the absence of a [+] cluster in the derivation, it merges externally.

The second mixed cluster, [+c-m] (typically, an Instrument), is argued by Potashnik (2012) to be the role realized by the subject of emission verbs, discussed in section 3.2.¹⁸ This cluster also demonstrates the

¹⁸ Potashnik's (2012) proposal differs from Reinhart's (2002) analysis of this class; under the latter, emission verbs are viewed as 'theme unergatives', i.e. as having a [-c-m] cluster. To account for their unergative derivation, a constraint is introduced into the system, according to which marking procedures (that mark all [-] clusters as merging internally) apply only to *n*-place entries for which *n*>1. Since 'theme unergatives' are one-place verbs, their [-] cluster is not marked and merges externally. As pointed out by Potashnik, this constraint has several theoretical disadvantages (see Potashnik 2012, p.256); moreover, there is no empirical evidence that the role of emission verbs is a [-c-m] cluster. Potashnik proposes that their role is actually a mixed [+c-m] cluster, and offers

mapping pattern of mixed clusters: it merges externally in the absence of a [+] cluster (as shown by the genitive of negation test in (51b)), and internally (as a PP) when a [+] cluster is present, as illustrated in (51c).¹⁹

51. (a) **Telefon** **zvonil** **ves'** **den'.**
 phone_{NOM.MASC} ring_{PAST.Sg.MASC} all day
 'The phone was ringing all day'
- (b) ***Ni** **odnogo** **telefona** **ne** **zvonilo.**
 not one phone_{GEN.MASC} NEG ring_{PAST.Sg.NEU}
- (c) **Maša** **zvonila** **v** **kolokol** / **v** **dver'.**
 Maša ring_{PAST.Sg.FEM} in bell in door
 'Masha rang the bell / the door-bell'

The two additional classes of verbs mentioned in the previous sections are reflexive and reciprocal verbs. Reinhart and Siloni (2005) and Siloni (2012) argue that these verbs are derived from their transitive alternates by a 'bundling' operation, which takes the two theta-roles of the verb (e.g. an Agent and a Theme) and forms one complex theta-role that retains the thematic properties of both 'original' roles. For example, the transitive entry *wash* [+c+m],[-c-m] (as in 'John washed the dishes') turns via bundling into the intransitive entry *wash* [[+c+m][-c-m]] (as in 'John washed'); the complex theta-role is assigned to the sole argument of the intransitive, resulting in interpretation of this argument as both the Agent and the Theme of the event.

With the basics of the framework in mind, we next turn to redefining the set of verbs participating in the DDC in terms of the Theta System.

3.3.3 The Revised Definition of the Input for DDC Formation

In sections 3.1, 3.2 and 3.3.1 above, we examined different types of verbs, showing which classes permit the DDC alternation. It was demonstrated that the commonly accepted generalization- that the input for the Russian DDC formation is the set of unergative verbs- is inadequate, but no clear generalization was provided instead. In this section, I show that the input for DDC formation can be naturally defined within

empirical evidence that it has causal implications (i.e. compatible with a /+c interpretation). His analysis eliminates the need to restrict the marking procedures.

¹⁹ The two-place alternate in (51c) is possible only for a subset of emission verbs and is analyzed by Potashnik (2012) as a productive non-derivational Agent-Instrument pattern, attested individually with other types of verbs. The external role in this alternate is a [+c+m] cluster, and the mixed [+c-m] cluster merges internally in its presence.

the Theta System framework. Specifically, the claim is that under the Theta System, the inputs for DDC formation form a natural class of theta-roles: [+] clusters.

Below, the summarizing tables from section 3.3.1 are repeated, this time with their thematic information expressed in terms of the theta- clusters. As evident from table (52), intransitives with a [+] cluster participate in the DDC, while intransitives with a [-] or a mixed cluster do not.

52. Intransitive Verbs:

Participate in the DDC		Do not participate in the DDC				
Agent Unergatives	Agent/ Exper. Unergatives	Unaccusatives	Emission Verbs	Subj- Experiencers	Reflexives	Reciprocals
V[+c+m]	V[+m]	V[-c-m]	V[+c-m]	V[-c+m]	V[[+c+m][-c-m]]	V[[+c+m][-c-m]]
<i>rabotat'</i> (work) <i>begat'</i> (run) <i>pet'</i> (sing) ...	<i>spat'</i> (sleep) <i>otdyxat'</i> (rest) ...	<i>rasti</i> (grow) <i>padat'</i> (fall) ...	<i>potet'</i> (sweat) <i>vonjat'</i> (stink) ...	<i>volnovat'sja</i> (worry) <i>udivljat'sja</i> (be surprised) ...	<i>myt'sja</i> (wash) <i>brit'sja</i> (shave) ...	<i>obnimat'sja</i> (hug) <i>vstrečat'sja</i> (meet) ...

Transitive verbs with a [+] cluster can participate in the DDC only if they allow 'object-drop'.

53. Transitive verbs:

Participate in the DDC	Do not participate in the DDC		
Object-drop Agent-Theme Transitives	Agent-Theme Transitives	Cause-Theme Transitives	Experiencer-Theme Transitives
V[+c+m], [-c-m]	V[+c+m], [-c-m]	V[+c], [-c-m]	V[+m], [-c-m]
<i>pisat'</i> (write) <i>čitat'</i> (read) <i>jest'</i> (eat) ...	<i>stroit'</i> (build) <i>varit'</i> (cook) <i>čistit'</i> (clean) ...	<i>otkryvat'</i> (open) <i>napolnjat'</i> (fill) <i>razbivat'</i> (break) ...	<i>ljubit'</i> (love) <i>nenavidit'</i> (hate) <i>znat'</i> (know) ...

Therefore, the input for the DDC formation in Russian can be defined as follows:²⁰

54. Input for DDC formation in Russian

A Russian verb can participate in the DDC alternation iff it is an intransitive verb (including transitive verbs that allow object-drop) with a [+] theta-cluster.

It should be noted at this point that the commonly accepted imprecise definition of the set of verbs that allow DDC's in Russian as intransitives with an external theta-role is an instance of a broader issue.

Horvath and Siloni (2011) observe that under the Theta System the term *externally mapped theta-role* in fact lumps together two distinct kinds of roles: an inherently external role (a [+] cluster), and a role that *de facto* gets mapped externally. It was shown in section 3.3.2 that some theta-roles, specifically the

²⁰ It can be argued that the exclusion of other transitive verbs, and more generally the impossibility to realize internal arguments in the DDC (in contrast to adjuncts; see section 3.1 above), might be a syntactic restriction (rather than a restriction on the argument structure). This option will not be pursued here.

mixed clusters [+c-m] and [-c+m], get mapped internally in derivations that include a [+] cluster and externally in the absence of a [+] cluster. Therefore, although the mixed clusters are not inherently external roles (i.e. they are not specified as external in the lexicon), in intransitive derivations they always merge externally. So the definition of the input for DDC formation as intransitive verbs with *an externally mapped theta-role* includes both verbs with a [+] cluster and verbs with a mixed cluster. The revised definition proposed here, on the other hand, defines the input more precisely as the set of intransitive verbs that have *an inherently external theta-role*.

Recall that the set of [+] clusters includes the roles [+c+m], [+m], and [+c], but the discussion so far revolved around the former two (namely [+c+m] and [+m]). As far as I can see, there are no intransitives or object-drop transitives with a [+c] cluster in Russian; if such verbs did exist, they would be predicted by this analysis to participate in the DDC alternation as well.

4. The DDC Formation Operation

In the previous chapter, the input for the DDC formation was identified; next, we turn to discuss additional questions that need to be addressed in order to provide an adequate definition of the operation. Section 4.1 is concerned with the argument structure of the DDC. Specifically, it is shown that the argument of the input verb cannot be detected in the DDC alternate; we will argue that this is so since the original theta-role is manipulated in the course of the formation process. Sections 4.2 and 4.3 discuss the component of grammar in which the DDC is created. In section 4.2, I present some representative examples of analyses that derive the DDC syntactically, and in section 4.3, I show that the predictions of such accounts are not borne out for the Russian variant of the construction; in addition, I argue that the revised definition of the input proposed in the previous section is also an argument in favor of a lexical rather than syntactic formation of the Russian DDC. Section 4.4 defines the lexical operation that creates the DDC; the operation includes modification of the input verb's theta-role and results in a verbal entry that is interpreted as a psychological state with an Experiencer argument. Section 4.4 also discusses the entailments involved in the interpretation of the psychological state and the role of the adverbs in the interpretation.

4.1 Argument Structure

It is generally agreed in the literature that the Dative subject of the DDC is understood as an Experiencer rather than an Agent (e.g. Franks 1995, Benedicto 1995, Marušič and Žaucer 2006, Rivero and Arregui 2012). This raises the question whether the original argument of the input verb (Agent [+c+m] or Sentient [+m]) is present in the DDC. This question can be addressed through application of agenthood diagnostics, which are based on the fact that certain elements, such as purpose clauses and agent-oriented adverbs, are licensed in a sentence only when an Agent is present, either explicitly or implicitly.²¹ If the diagnostics detect an Agent in the DDC, it can mean one of the following: (i) the Dative subject realizes the original theta-role of the input verb (but then it has to be explained how come it has an Experiencer flavor), (ii) there is a null element in the structure that bears the original theta-role (as suggested by Benedicto (1995), Marušič and Žaucer (2006), and Rivero and Arregui (2012)), or (iii) the argument bearing the original theta-role is represented semantically, but not syntactically, similarly to what is often proposed for passive verbs (as suggested by Schoorlemmer (1993)). If the diagnostics do

²¹ As shown below, Sentient arguments also license purpose clauses and agent-oriented adverbs, since the [+m] cluster is compatible with an agentive [+c+m] interpretation (see section 3.3.2 above).

not detect an Agent in the DDC, it means that the formation operation includes a manipulation of the theta-role of the input verb.

In (55) and (56) below, two agenthood diagnostics are applied. The basic derivation in (a) includes an explicit Agent (*Ja*), whose presence licenses the purpose clause and the agent-oriented adverb *naročno* (deliberately). The (b) sentences show a bi-clausal structure with an overt desiderative predicate in the matrix clause; the embedded infinitival clause includes a null element realizing the Agent of the verb *rabotat'* (work), and this implicit Agent licenses the purpose clause and the agent-oriented adverb. In contrast, the DDC sentences in (c) are ungrammatical with the purpose clause and the agent-oriented adverb.

55. (a) *Ja xorošo rabotaju čtoby ugodit' načal'niku.*
 I_{NOM} well work_{PRESENT.1Sg} in order to please_{INF} boss_{DAT}
 'I work well to please the boss'
- (b) *Mne xočetsja xorošo rabotat' čtoby ugodit' načal'niku.*
 I_{DAT} want_{PRESENT.3Sg-SJA} well work_{INF} in order to please_{INF} boss_{DAT}
 'I feel like working well in order to please the boss'
- (c) **Mne xorošo rabotajetsja čtoby ugodit' načal'niku.*
 I_{DAT} well work_{PRESENT.3Sg-SJA} in order to please_{INF} boss_{DAT}
56. (a) *Ja naročno ploxo rabotaju.*
 I_{NOM} deliberately badly work_{PRESENT.1Sg}
 'I deliberately work badly'
- (b) *Mne xočetsja naročno ploxo rabotat'.*
 I_{DAT} want_{PRESENT.3Sg-SJA} deliberately badly work_{INF}
 'I feel like working badly deliberately'
- (c) **Mne naročno ploxo rabotajetsja.*
 I_{DAT} deliberately badly work_{PRESENT.3Sg-SJA}

The same diagnostics can be applied to verbs of the type V[+m], e.g. *spat'* 'sleep'. Recall that the Sentient theta-cluster [+m] is undefined with respect to the value of its C feature, and thus compatible with both an agentive [+c+m] interpretation and an Experiencer [-c+m] interpretation. In the basic derivation of *spat'* 'sleep' in the (a) examples below, the subject (*Ja*) has an agentive meaning and thus licenses the purpose clause and the agent-oriented adverb; in the bi-clausal desiderative structure in (b),

these elements are licensed by the null subject of the embedded clause. The DDC sentences in (c), on the other hand, are ungrammatical.

57. (a) *Ja xorošo splju čtoby produktivno rabotat'.*
 I_{NOM} well sleep_{PRESENT.1SG} in order to productively work_{INF}
 'I sleep well in order to work productively'
- (b) *Mne xočetsja xorošo spat' čtoby produktivno rabotat'.*
 I_{DAT} want_{PRESENT.3SG-SJA} well sleep_{INF} in order to productively work_{INF}
 'I feel like sleeping well in order to work productively'
- (c) **Mne xorošo spitsja čtoby produktivno rabotat'.*
 I_{DAT} well sleep_{PRESENT.3SG-SJA} in order to productively work_{INF}
58. (a) *Ja naročno ne spala.*
 I_{NOM} deliberately NEG sleep_{PAST.SG.FEM}
 'I deliberately didn't sleep'
- (b) *Mne xočetsja naročno ne spat'.*
 I_{DAT} want_{PRESENT.3SG-SJA} deliberately NEG sleep_{INF}
 'I feel like deliberately not sleeping'
- (c) **Mne naročno ne spalos'.*
 I_{DAT} deliberately NEG sleep_{PAST.SG.NEU-SJA}

The diagnostics strongly suggest that an argument realizing the original theta-role of the input verb (Agent [+c+m] or Sentient [+m]) is not present in the DDC, explicitly or implicitly.²²

To sum up, it is evident from the data presented in this section that there is a difference between the argument structure in the basic derivation and the argument structure in the DDC with the same verb. Specifically, the former involves an Agent or a Sentient that cannot be detected in the latter, which

²² An additional agenthood diagnostic proposed in the literature is licensing of an instrument phrase (see Reinhart 2002, Siloni 2002). As illustrated in (i) below, the DDC seems to allow instruments, although it is possible only with a few verbs (most notably *pisat'* 'write'), and not all speakers accept such sentences as grammatical (see Gerritsen 1990). The fact that the DDC licenses instruments seems to contradict the results of the other agenthood diagnostics, but there is a reasonable explanation for it under the analysis proposed here, as presented in fn. 33 below.

- (i) *Emu ne pišetsja takim tupym karandašom.*
 he_{DAT} NEG write_{PRESENT.3SG-SJA} such_{INST} dull_{INST} pencil_{INST}
 'He doesn't feel like writing with such a dull pencil' / 'He feels that his writing is going badly with such a dull pencil'

instead features an Experiencer argument. This difference must be accounted for in an analysis of the DDC. In the following section, I present examples of existing analyses of the DDC, focusing specifically on the question whether and how they account for this and other properties of the construction.

4.2 Syntactic DDC Formation: Representative Proposals

An analysis of the DDC has to explain three main effects that are involved in the alternation:

- i. The DDC denotes a different type of eventuality than the one denoted by the active alternate. While the latter denotes an activity (e.g. working) or a physical state (e.g. sitting), the DDC alternate denotes a psychological state with regard to this eventuality. As shown in section 2.3.2 above, the DDC alternate describes either a disposition / capability (in view of psychological circumstances) to participate in the eventuality or an evaluation of how the eventuality is going.
- ii. The argument in the DDC is an Experiencer, while the argument in the active alternate is an Agent or a Sentient (see previous section).
- iii. The role and the interpretation of adverbs are different in the two derivations. First, as shown in section 2.2.2, the adverbial modification, which is optional in the basic derivation, becomes obligatory in the DDC (negation is also possible instead of an adverb). In addition, the interpretation of the adverb is ‘shifted’: for example, in the sentence *Ja segodnja ploxo rabotaju* (I_{NOM} today badly work_{PRESENT.1Sg}) ‘I’m working badly today’, the adverb *ploxo* ‘badly’ describes the objective quality of the work; in contrast, in *Mne segodnja ploxo rabotajetsja* (I_{DAT} today badly work_{PRESENT.3Sg-SJA}), it refers to a negative disposition towards working or a subjective negative evaluation of the activity.

Many of the analyses proposed in the literature derive the DDC by means of insertion of additional structure above the VP headed by the base verb. Benedicto (1995) and Rivero and Arregui (2012) attribute the characteristic psychological interpretation of the DDC (see (i) above) to the presence of a null Modal head that takes as its complement a clause (AgrP / TP) which includes the base verb and its implicit argument.²³ The Dative noun-phrase in the DDC is analyzed as the subject of the Modal, rather than an argument of the base verb, hence its Experiencer flavor (see (ii) above). The mandatory adverbial phrase is also viewed as an argument of the Modal (Rivero and Arregui 2012), hence the ‘shift’ in its meaning (see (iii) above).

²³ According to Benedicto (1995), the theta-role of the base verb is realized syntactically as *pro*. Rivero and Arregui (2012) suggest that the subject position of the embedded clause is saturated by a variable (the ‘reflexive pronoun’) interpreted as the Agent of V. Note that such analyses are problematic in view of the diagnostics presented in the previous section, as discussed in section 4.3.1 below.

Marušič and Žaucer (2006) offer a similar analysis, but with a null psych-verb (rather than a functional head) above the base VP. They suggest that the Russian DDC is a bi-clausal structure with a covert GIVE predicate, interpreted as a psych-verb and taking a VP complement. This structure, illustrated in (59) below, is the null parallel of the Slovenian 'feel-like' paraphrase with an overt non-active *dati* (give), shown in (60). Under this analysis, the input verb's theta-role is realized by PRO, and the Dative noun-phrase is the Experiencer argument of the null psych-verb, i.e. the subject of the upper clause.

59. ***Mne ne*** GIVE [PRO ***rabotajetsja***].

I_{DAT} NEG work_{PRESENT.3Sg-SJA}

'I don't feel like working'

60. ***Danes se mi ne da delat.*** (Slovenian)

today SE I_{DAT} NEG give_{3Sg} work

'I don't feel like working today'

Marušič and Žaucer 2006, p.1148, (84a)

Both types of analyses share the view that the base verb and its argument are present in the structure of the DDC, and that the semantic effects that characterize the construction are derived via syntactical embedding of the base VP under a higher head. In the following section, the problems raised by this view are discussed.

4.3 Against Syntactic DDC Formation in Russian

4.3.1 An Implicit Argument is not Detected in the Structure

According to the analyses described in the previous section, the theta-role of the base verb is realized by a null element in the DDC structure. However, this view is challenged by the data presented in section 4.1 above. Recall that agenthood diagnostics do not detect an implicit argument bearing the original theta-role of the verb in the DDC structure (see (61b) below), while the abovementioned analyses predict that it should be detected, similarly to the way it is detected in a bi-clausal structure with an overt desiderative predicate (repeated in (61a) below).²⁴

61. (a) ***Mne xočetsja*** [PRO ***xorošo rabotat' čtoby ugodit' načal'niku***].

I_{DAT} want_{PRESENT.3Sg-SJA} well work_{INF} in order to please_{INF} boss_{DAT}

'I feel like working well in order to please the boss'

²⁴ Marušič and Žaucer (2006) explicitly equate between the structures; when presenting the overt and the covert 'feel-like' constructions, they argue that "the most prominent difference between the two reduces to the fact that the matrix verb *luštati* ['desire' in Slovenian, parallel to the Russian *xotet'*; D.J. Kim] replaces a near-synonymous phonologically null verb ... while the structures are essentially parallel" (p.1095).

- (b) **Mne xorošo rabotajetsja čtoby ugodit' načal'niku.*
 I_{DAT} well work_{PRESENT.3Sg}-SJA in order to please_{INF} boss_{DAT}

Thus, it seems that the Russian DDC does not involve an implicit argument realizing the theta-role of the base verb; next we turn to examine whether the verb itself can be detected in the structure.

4.3.2 The Base Verb is not Detected in the Structure

The question whether the base verb is present in the DDC can be examined through the possible patterns of adverbial modification in the construction. If the DDC includes the original verb, it is expected that adverbials that can modify this verb in its basic derivation would also be admissible in the DDC. However, this prediction is not borne out. Some manner adverbs, like *dolgo* 'for a long time', can modify the input verb both in the basic derivation (see (62a)) and in the bi-clausal desiderative paraphrase (see (62b)), but cannot appear in the DDC (see (62c)).

62. (a) *Ja dolgo tancevala.*
 I_{NOM} long dance_{PAST.Sg.FEM}
 'I danced for a long time'
- (b) *Mne xotelos' dolgo tancevat'.*
 I_{DAT} want_{PAST.Sg.NEU}-SJA long dance_{INF}
 'I felt like dancing for a long time'
- (c) **Mne dolgo tancevalos'.*
 I_{DAT} long dance_{PAST.Sg.NEU}-SJA

Moreover, it has been shown by Rivero and Arregui (2012) that the DDC in Polish and Czech allows two semantically incompatible adverbials, e.g. *well* and *badly/terribly*, as illustrated in (63a) and (63b). Recall that according to their account the DDC involves an empty Modal head above the clause with the base verb; so such sentences are possible because one adverb (*badly* in the examples) modifies V, and the other one (*well* in the examples) modifies the Modal head. If the Russian DDC involved a structure similar to the one of the Polish and Czech variants (as they indeed suggest), the same pattern of modification would be expected to be possible in Russian as well.²⁵ However, Russian does not allow two incompatible adverbials, as illustrated in (63c). This strongly suggests that in contrast to the Polish and Czech constructions, the Russian variant does not involve both V and a Modal head.

²⁵ As mentioned in section 2.3.1 above, Rivero and Arregui (2012) argue that there are two variants of the construction in the Slavic languages: one variant exists in Russian and West Slavic languages (e.g. Polish, Czech, Slovak), and the other in South Slavic languages (e.g. Slovenian, Bulgarian, Serbian/Croatian).

63. (a) **Dobrze Jankowi tańczyło sie fatalnie.** (Polish)
 well J_{DAT} danced_{NEU} SE terribly
 ‘John could not help enjoying his awful dancing’

Rivero and Arregui 2012, p.316, (45a)

- (b) **Jankovi se dobře tančilo bylbe.** (Czech)
 J_{DAT} SE well danced_{NEU} badly
 ‘John could not help enjoying his awful dancing’

Rivero and Arregui 2012, p.316, (45b)

- (c) ***Emu xorošo tancevalos’ žutko.**
 he_{DAT} well dance_{PAST.SG.NEU-SJA} terribly

Marušič and Žaucer (2006) present a similar argument using incompatible temporal adverbials. Under their analysis, the DDC is a bi-clausal structure with a covert matrix predicate; thus it allows two temporal adverbials, one relating to the dispositional eventuality denoted by the null predicate (*yesterday* in (64a)), and another one relating to the embedded V (*tomorrow* in (64a)). However, while the Russian bi-clausal paraphrase with an overt desiderative predicate does allow two incompatible temporal adverbials (see (64b)), the Russian DDC does not (see (64c)).

64. (a) **Včeraj se mi ni šlo jutri domov.** (Slovenian)
 yesterday SE I_{DAT} AUX_{NEG.PAST} go tomorrow home
 ‘Yesterday, I didn’t feel like going home tomorrow’

Marušič and Žaucer 2006, p.1098, (13)

- (b) **Včera mne ne xotelos’ segodnja tancevat’.**
 yesterday I_{DAT} NEG want_{PAST.SG.NEU-SJA} today dance_{INF}
 ‘Yesterday I didn’t feel like dancing today’

- (c) ***Včera mne segodnja ne tancevalos’.**
 yesterday I_{DAT} long NEG dance_{PAST.SG.NEU-SJA}

To sum up, in contrast to West Slavic (e.g. Polish and Czech) and South Slavic (e.g. Slovenian) languages, the Russian DDC does not allow two incompatible (manner / temporal) adverbials, which strongly suggests that the structure does not involve both a null predicate / a Modal head *and* the original V. In addition, the original V cannot be detected using manner adverbs like *dolgo* ‘for a long time’. These findings, together with the results of the agenthood diagnostics presented in section 4.1, challenge the analyses of Benedicto (1995), Rivero and Arregui (2012), and Marušič and Žaucer (2006). It seems that

the Russian DDC is not derived by means of insertion of additional syntactic structure above the base verb and its argument; rather, the base verb and its theta-role are *modified* in the process of the DDC formation. In view of these findings, it seems plausible that the DDC is not derived syntactically in Russian; the next section presents a further argument to support this view.

4.3.3 The Input Set as an Argument for Lexical Formation

In contrast to the analyses that derive the DDC syntactically, Franks (1995) proposes that the formation process is lexical in Russian, but syntactic in other Slavic languages, such as Polish (West Slavic) and Serbian/Croatian (South Slavic). His argument is based on the observation that the Russian variant of the DDC is more restricted in comparison to its counterparts in other Slavic languages, the restriction being that verbs with internal arguments cannot serve as input (see section 3.1 above). This restriction might follow, according to him, from general word formation rules, or be explicitly stipulated in terms of the input verbs' argument structure, which at any rate are confined to the lexicon. Therefore, the restriction on the DDC formation in Russian is a result of it being a lexical process. The syntactic component of grammar, on the other hand, is a productive engine; so the fact that there is no similar restriction on the formation process in other Slavic languages is a consequence of their DDC being created syntactically. I believe that Franks' conclusion is correct, but for different reasons. As mentioned in section 3.1 above, he defines the set of verbs that allow DDC's in Russian as the set of unergative verbs, i.e. intransitives with an externally mapped argument. This definition of the input regards the mapping of an argument in the syntax, and thus is fully compatible with a syntactic formation process. In other words, if the input for the formation process were unergatives, as claimed by Franks, then the set could be defined in syntactic terms: the set of verbs that map their subject externally and do not have any internal arguments. The restriction on the input could not then serve as evidence that the process is lexical. The difference between Russian on the one hand and West Slavic and South Slavic on the other could be that in the former the operation is limited to unergatives while in the latter this is not the case. The decisive evidence for a lexical DDC formation in Russian comes from the more precise definition of the input set, offered in section 3.3.3 above. Recall that the claim that all unergative verbs allow DDC's was rejected in section 3.2, based on the case of emission verbs, Subject-Experiencer verbs, reflexives, and reciprocals. It was shown that these verbs, e.g. a Subject-Experiencer verb of the type V[-c+m], are not a suitable input, despite the fact that they have an externally mapped argument (and no other arguments). Instead, the input for DDC formation was defined as *the set of intransitive verbs that have a [+] cluster*. Such definition of the input is compatible only with a lexical formation operation, since the feature composition of theta-roles is accessible in the lexicon, but not in the syntax. In other words, the

fact that not the actual mapping onto syntax, but specifically the feature composition of the theta-role is accessible to the formation process shows that it is lexical (see Horvath and Siloni 2011 for a parallel argument regarding causative verbs).

Furthermore, the claim that the DDC formation is lexical in Russian fits into a ‘bigger picture’ that has been suggested regarding verbal alternations across languages and specifically in Russian. It has been argued by Reinhart and Siloni (2005) that universal arity operations (such as reflexivization, reciprocalization, decausativization, and saturation) across languages are subject to what they call the *Lexicon-Syntax Parameter*, meaning that they can apply either in the lexicon or post-lexically, depending on the setting of the parameter. Some puzzling variations between languages are successfully explained using the parameter (see Reinhart and Siloni 2005, Siloni 2012 and references therein). Moreover, it is shown that languages tend to be consistent regarding the setting of the parameter, and that Russian has a ‘lexicon’ setting, deriving reflexives and reciprocals, for example, via a lexical operation.²⁶ Therefore, the proposal that the DDC formation operation is lexical in Russian is compatible with the setting of the parameter that was independently suggested for this language.

To conclude, the claim that DDC formation is a lexical operation in Russian receives direct support from the fact that it targets verbs with a role specified as external in the lexicon, i.e. a [+] cluster. This type of information, which concerns the internal composition of thematic clusters, is not accessible to the syntactic component. Under a syntactic derivation of the DDC in Russian, it would be completely unclear why some classes of unergative verbs do not participate in the construction.²⁷ Additional support for this claim comes from the fact that it has been independently suggested in the literature (Reinhart and Siloni 2005, Hron 2012) that arity operations in Russian are lexical. Next, we turn to discuss the exact nature of the operation that derives the DDC alternate from the base verb.

²⁶ The sample of languages examined by Reinhart and Siloni (2005) includes also Serbian/Croatian, which is argued to have a ‘syntax’ setting of the parameter, in accordance with Franks’ proposal. Hron (2012) offers a thorough survey of Slavic languages with regard to the value of the Lex-Syn parameter; he also argues that Russian has a ‘lexicon’ setting (alongside other East Slavic languages, such as Ukrainian and Belarusian), while West and South Slavic languages have a ‘syntax’ setting.

²⁷ It would be interesting to check whether the languages that were argued by Franks (1995) to have a syntactic DDC formation (Polish and Serbian/Croatian) allow DDC’s with emission verbs, Subject-Experiencer verbs, reflexives, and reciprocals. There are no relevant examples or discussion in the literature.

4.4 Definition of the Operation

In the previous section, it was concluded that the DDC formation in Russian is a lexical operation that modifies the input verb and its argument structure. Next, an exact definition of the modification that V and its theta-role undergo is proposed. The main components of the analysis are outlined below:

- The lexical operation creating the DDC involves a modification of the original theta-role of the input verb ([+c+m] or [+m]) into an Experiencer [-c+m]. The resulting verbal entry V-SJA[-c+m] is interpreted as a psychological state experienced by the [-c+m] argument.²⁸
- The psychological state V-SJA is a ‘feeling’ regarding the event denoted by the input V. If V is a factual event, the feeling is a subjective evaluation of how V is going; if V is a potential event, the feeling is a disposition towards V. In any case, V-SJA entails an actual or potential event of V (with its participant referring to the same individual as the Experiencer of V-SJA), but these entailed elements are not syntactically present in the construction, and are not available for modification; therefore, they cannot be detected by the diagnostics discussed in sections 4.1 and 4.3.2.
- The adverbs in the DDC are needed in order to qualify the psychological state V-SJA. They specify whether the evaluation / disposition denoted by V-SJA is positive or negative.

The following sections elaborate on the different aspects of the proposed account.

4.4.1 DDC Formation Involves Feature Adjustment

In section 4.1 above, it was shown through agenthood diagnostics that the [+] cluster of the input verb is not present in the DDC. In view of that, I suggest that the original theta-cluster is modified by the formation operation. The idea that the DDC formation involves manipulation of the input verb’s theta-role is mentioned by Franks (1995) and Fehrman et al. (2010); they suggest that the Agent role of the original entry is modified so that it is understood as an Experiencer.²⁹ However, it is not clear how an Agent can become an Experiencer under the traditional view of theta-roles as primitives.³⁰ Under the Theta System, on the other hand, role adjustment is possible, since roles are viewed as feature clusters. In our case, the adjustment involves a reevaluation of the /+c feature of the Agent [+c+m] cluster to /-c; the resulting cluster is [-c+m], an Experiencer (see (65a)). For a [+m] cluster (the role of verbs like *spat’* ‘sleep’), the value of the C feature is initially undefined, meaning that it is compatible with both a

²⁸ Recall that the –SJA suffix is found on many different types of verbs in Russian; the notation V-SJA used in this section refers specifically to the output of the DDC formation operation and not to any other verbs suffixed with –SJA.

²⁹ According to Franks’ proposal, the Experiencer is realized by the Dative noun phrase; Fehrman et al., on the other hand, suggest that this argument is implicit.

³⁰ It can be suggested that the Agent role is removed and the Experiencer is inserted, but such a proposal is not very elegant from a theoretical point of view.

positive and a negative setting; the effect of the feature adjustment on this cluster is that the value is fixed to /-c (see (65b)).

65. **Feature Adjustment in the DDC Formation Operation:**

(a) V[+c+m] --> V-SJA[-c+m]

e.g. 'work': *rabotat'*[+c+m] --> *rabotat'sja*[-c+m]

(b) V[+m] --> V-SJA[-c+m]

e.g. 'sleep': *spat'*[+m] --> *spat'sja*[-c+m]

The Theta System thus enables us to offer a straightforward mechanism that turns the [+] theta-clusters of the input verbs into the Experiencer role [-c+m]. In fact, this mechanism has already been proposed in the literature; Horvath and Siloni (2011) suggest that a lexical operation of *causativization* includes exactly the same feature adjustment, taking [+c+m] or [+m] clusters as input and turning them into [-c+m]. We next turn to discuss the new lexical entry created by the operation: V-SJA[-c+m].

4.4.2 The Resulting Lexical Entry

The resulting theta-cluster [-c+m], an Experiencer, is usually associated with verbs denoting psychological states, such as *volnovat'sja* 'worry' and *udivljat'sja* 'be surprised' (as mentioned in section 3.3.2 above). Similarly, the verbal entry V-SJA resulting from the DDC formation operation does not denote the activity / physical state denoted by the input V; rather, V-SJA is understood as a psychological state experienced by its argument. But what does it mean to experience *working* or *dancing* as psychological states?

Under one of the readings available for the DDC, the psychological state is a subjective evaluation of how the eventuality denoted by V is going, e.g. 'I feel that my work is going badly'. In this case, an actual event of V is entailed by the psych state V-SJA, and the Experiencer argument is also understood as the Agent of the entailed event, i.e. the one who is actually working. This 'double' nature of the argument has been noted for example by Ružičkova (1971), who is cited in Rivero and Arregui 2012 stating (regarding the Slovak construction): "the agent is at the same time the experiencer, who subjectively 'feels through' his own action, always evaluating it". In the other readings of the DDC, e.g. 'I don't feel like working' and 'I can't work (due to my psychological circumstances)', the psychological state is a disposition towards the possibility to perform V. Here, V-SJA also entails an event V executed by the Experiencer, with the difference being that it is not an actual event in the real world, but rather a potential event (in some possible world).

The interpretation of the verbal entry V-SJA[-c+m] is informally summarized in (66) below. The entailment relationship between the input entry V and the corresponding V-SJA is formulated in (a) and (b). A similar meaning postulate is offered by Horvath and Siloni (2011) regarding the entailment relationship between V and the output of lexical causativization CAUS-V. As mentioned above, causativization is argued to include the same feature adjustment as the one suggested here for the DDC formation; it is therefore not surprising that the semantic relationship between the input and the output of this adjustment is similar.

66.

V-SJA denotes a psychological state regarding the event denoted by the input V

Subjective evaluation of V	Disposition towards V
V-SJA entails: (a) an actual event V (b) the [-c+m] of V-SJA is the [+c+m] / [+m] of V	V-SJA entails: (a) a potential/possible event V (b) the [-c+m] of V-SJA is the [+c+m] / [+m] of V

As shown in sections 4.1 and 4.3.2 above, the event denoted by V and its participant cannot be detected in the DDC using adverbial phrases, agent-oriented adverbs, and purpose clauses. This means that V and its theta-role are not present in the syntactic structure of the construction, and are not available for modification. Under the analysis proposed here, these elements constitute the entailed meaning component in the DDC semantics; they are not syntactically realized, since the DDC sentence realizes the psych-verb V-SJA and its Experiencer argument. Thus, modifying elements introduced to the DDC sentence can only modify the psychological state and its participant; they cannot modify the entailed event because they are outside of its scope. To clarify this point, a first rough suggestion for the construction's semantic representation is presented in (67b) below (a detailed semantic analysis of the DDC is beyond the scope of this work; the preliminary formula is presented only in order to make the claim about the scope of the entailed event more concrete).

67. (a) **Maše ne rabotajetsja.**

Masha_{DAT} NEG work_{PRESENT.3SG}-SJA

'Masha doesn't feel like working' (dispositional meaning)

(b) Representation of the dispositional meaning:

$\exists s[\text{Disposition}(s) \ \& \ \text{Experiencer}(s,M) \ \& \ \exists e[\text{work}(e) \ \& \ \text{Agent}(e,M) \ \& \ \text{Cause}(e,s)] \ \& \ \text{negative}(s)]$

The preliminary formula in (67b) expresses the idea that the DDC denotes a psychological state *s* (a disposition in this example), whose argument is an Experiencer and which is qualified as negative (this meaning component is contributed by the adverb, as discussed below). The event variable *e* is introduced by an existential quantifier with a restricted scope (the part shown in italics); the participant of the event (the Agent) is identical to the participant of the psychological state (in this example, *Masha* is both the Experiencer and the Agent), and there is a relation between the event and the state, which is described at this point in terms of causality, i.e. the potential event of working brings about the psychological state.³¹ A modifying element introduced to the DDC will be in the scope of $\exists s$ but outside the scope of $\exists e$. Since modifying elements such as agent-oriented adverbs and purpose clauses are semantically incompatible with the psychological state, their introduction renders the DDC ungrammatical.³² Therefore, the analysis suggested here manages to account for the fact that even though the event denoted by the input *V* and its participant are entailed in the DDC, they cannot be detected by the standard diagnostics involving modifying elements.³³

4.4.3 The Role of the Adverbs in the DDC

The new lexical entry created by the operation, V-SJA, denotes a psychological state, a subjective evaluation of the event denoted by *V* or a disposition towards the event denoted by *V*, that the [-c+m] argument experiences. A DDC sentence expresses whether the evaluation or the disposition is negative or positive, but the information regarding the positive / negative value of the psychological state is not encoded in V-SJA itself (in contrast to “true” psych-verbs, which encode a specific feeling such as *worry*). Since it has to be specified whether the evaluation / disposition denoted by V-SJA is positive or negative, the construction involves adverbial phrases that provide this information. In other words, the role of the

³¹ As mentioned above, the event involved in the dispositional meaning is a potential event in some possible world. In this initial formula, we abstract away from this meaning ingredient for the sake of simplicity.

³² A similar explanation is offered by Meltzer-Asscher (2011) in her discussion of the difference with regard to tests detecting an implicit argument in adjectival passives.

³³ In fn. 22 above, it was mentioned that the DDC does allow instrumental phrases, at least in some (restricted) cases, like (i) below. Note that in (i), the instrumental phrase can be understood as the reason for the psych state described in the sentence, i.e. he doesn’t feel like writing / feels that writing is going badly *because of the dullness of the pencil*. This idea is mentioned by Gerritsen (1990), who interprets the instrument in this example as a reference to an external factor which evokes the disposition. Therefore, it can be the case that the instrument is allowed here because it relates to the psych state and not to the entailed event of writing. Since a thorough investigation of this issue is beyond the scope of this work, the idea is raised here as a speculation.

(i) *Emu ne pišetsja takim tupym karandašom.*

he_{DAT} NEG write_{PRESENT.3SG-SJA} such_{INST} dull_{INST} pencil_{INST}

‘He doesn’t feel like writing with such a dull pencil’ / ‘He feels that his writing is going badly with such a dull pencil’

adverb in the DDC is to modify the psychological state V-SJA by specifying whether the experienced feeling regarding V is positive or negative. Negation is also interpreted as negative qualification, roughly synonymous to *ploxo* ‘badly’, as shown by the results of Questionnaire II (section 2.3.2).³⁴

This analysis of the role of the adverb provides an explanation for the results of the questionnaire presented in section 2.2.2 above. Recall that it was shown that the construction necessarily requires the presence of either an adverb or negation; ‘bare’ DDC’s were judged by informants as ungrammatical. This is so because without the adverbial phrases, it is not clear whether the psych state experienced by the argument is positive or negative and it is meaningless to talk about a psych state like evaluation without specifying this information.³⁵

The analysis is also supported by the fact that the adverbs found in the DDC always provide one of the ends of a positive-to-negative gradation line, i.e. they are always pairs that can be understood as ‘well’ vs. ‘badly’ (see also Benedicto 1995). In addition to the most popular (besides negation) *xorošo* ‘well’ and *ploxo* ‘badly’, the possible adverbs include pairs like *legko* ‘easily’ and *trudno / tjaželo* ‘with difficulty’, *otlično* ‘excellently’ and *skverno* ‘badly’, *prekrasno* ‘marvelously’ and *žutko* ‘terribly’, etc..

Crucially, the adverbs in the DDC cannot modify the event denoted by the input V, in accordance with the analysis proposed in section 4.4.2. This is evident from the fact that:

- (i) there are manner adverbs (e.g. *vniatel’no* ‘attentively’, *ostorožno* ‘carefully’) that can modify V in the basic derivation (see (68a)), but cannot modify V-SJA in the DDC (see (68b));
- (ii) there are adverbs (e.g. *legko* ‘easily’, *trudno / tjaželo* ‘with difficulty’) that are found in the DDC (see (69b)), but cannot modify the corresponding V in the basic derivation (see (69a));
- (iii) the adverbs that can be found both in the DDC and in the basic derivation (e.g. *xorošo* ‘well’, *ploxo* ‘badly’) are interpreted differently in the two cases; while (70a) necessarily states something regarding

³⁴ Pariser (1982) and Gerritsen (1990) also mention that negation in the DDC provides a negative flavor to the experience and is understood as an adverbial modifier.

³⁵ In section 2.2.1, some actual examples of use with ‘bare’ DDC’s were presented, one of them is repeated in (i). Such examples are rare, but can nonetheless be found both in the corpus and online. According to Gerritsen (1990), a positive modification is implied by default when there is no overt adverbial in the sentence, as is clear from the translation of (i). Such uses may be possible in real discourse, as they are accompanied by a context (or intonation) that provides information regarding the experienced psychological state; for example, the presence of *strano* ‘strangely’ in (i) presents the feeling described by the DDC as contradictory to the feeling of loneliness, so positive modification can be omitted from the DDC. In the questionnaires, on the other hand, the ‘bare’ DDC’s were presented without context as isolated utterances, and therefore judged as ungrammatical.

(i) *Strano, kogda ja byla odinokoj... mne pisalos’.*
 strangely when I_{NOM} was lonely I_{DAT} write_{PAST.SG.NEU-SJA}
 ‘Strangely, when I was lonely... I felt like writing / I could write / My writing was going well’

the objective quality of the work, (70b) can easily be uttered even when the quality of work is pretty bad (see also Gerritsen 1990 and Benedicto 1995).

68. (a) **Ja ostorožno tancevala.**
 I_{NOM} carefully dance_{PAST.Sg.FEM}
 'I danced carefully'
- (b) ***Mne ostorožno tancevalos'.**
 I_{DAT} carefully dance_{PAST.Sg.NEU-SJA}
69. (a) ***Ja trudno pisala.**
 I_{NOM} with difficulty write_{PAST.Sg.FEM}
- (b) **Mne trudno pisalos'.**
 I_{DAT} with difficulty write_{PAST.Sg.NEU-SJA}
 'I felt that it was difficult for me to write'
70. (a) **Ja xorošo rabotala.**
 I_{NOM} well work_{PAST.Sg.FEM}
 'I worked well' (i.e. the quality of the work was good; the results of the work were good)
- (b) **Mne xorošo rabotalos'.**
 I_{DAT} well work_{PAST.Sg.NEU-SJA}
 'I felt like working' / 'I could work' (i.e. I felt a positive disposition to work)
 'My work was going well' (i.e. I felt positively regarding my working)

These facts are not surprising under the analysis proposed here. Adverbs like *vnimatel'no* 'attentively' and *ostorožno* 'carefully' are not semantically compatible with a psychological state of evaluation or disposition, and hence cannot be found in the DDC. In contrast, adverbs like *legko* 'easily' and *trudno* / *tjaželo* 'with difficulty' are possible in the DDC because they can be understood as evaluative predicates modifying the psychological state; their role in the DDC (see (69b) above) is similar to their role in constructions like *Mne bylo trudno pisat'* (I_{DAT} was_{NEU} difficult write_{INF} - 'It was difficult for me to write'). The basic derivation of V does not involve an evaluative meaning and thus disallows these adverbs. Finally, the shift in the interpretation of adverbs like *xorošo* 'well' and *ploxo* 'badly' shows the difference between modifying an event of V (i.e. *Good(e)*) and modifying a psychological state V-SJA (i.e. *Good(s)*).

5. The Questionnaires

This chapter provides the details regarding the methods and the results of the two surveys that were conducted as part of the study; the questions that the surveys aimed to resolve and discussion of the results were presented in Chapter 2 above. Section 5.1 is concerned with the survey that collected acceptability ratings for various DDC types (licensing environments). Section 5.2 is concerned with the survey that checked which meanings are available for the negated and the adverbial DDC's.

5.1 Questionnaire I: Licensing Environments

5.1.1 Introduction

The goal of this survey was to compare acceptability ratings of six DDC types: negated DDC, adverbial DDC, negated DDC with a null subject, adverbial DDC with a null subject, 'bare' DDC, and Yes/No question DDC (the latter represents a 'bare' DDC in a downward entailing context). These six DDC types are referred to as experimental conditions A-F, as shown in Table 1 below.³⁶

Table 1: The experimental conditions

Condition	DDC type
A	negated DDC
B	adverbial DDC
C	'bare' DDC
D	Yes/No question DDC
E	negated DDC with a null subject
F	adverbial DDC with a null subject

5.1.2 Method

Informants:

The informants were 89 native speakers of Russian, who consider Russian to be the dominant language in their everyday lives. The ages of the informants ranged from 20-75; their education levels ranged from school education to doctorate degrees. 52% of the informants were female, and the rest male.

Materials:

The experimental materials consisted of 12 *token sets*. Each token set included the six experimental conditions A-F; the token sets differed from each other in the verb and the adjunct phrases used in the

³⁶ The availability of the null-subject variant was tested with the adverbial and the negated DDC, but not with the 'bare' and the Yes/No question types. The reason is that the latter options are clearly ungrammatical, based on a pre-test among several speakers and on searches online and in the corpus.

sentences.³⁷ Table 2 presents an example of a token set with the verb *tancevat'* (dance); for the full item list see Appendix II.

Table 2: The six experimental conditions in a token set with the verb *tancevat'* (dance)

	pronominal subject	null subject
negated DDC	<i>Mne segodnja ne tancujetsja.</i> I _{DAT} today NEG dance _{PRESENT.3Sg} -SJA	<i>Zdes' ne tancujetsja.</i> here NEG dance _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne segodnja xorošo tancujetsja.</i> I _{DAT} today well dance _{PRESENT.3Sg} -SJA	<i>Zdes' xorošo tancujetsja.</i> here well dance _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne segodnja tancujetsja.</i> I _{DAT} today dance _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe segodnja tancujetsja?</i> you _{DAT} today dance _{PRESENT.3Sg} -SJA	

Each informant rated 12 experimental sentences, i.e. two representatives of each experimental condition. Each of these 12 sentences belonged to a different token set, namely featured a different verb. In addition to the experimental items, the questionnaires included 'filler' sentences. Fillers are used in order to disguise the pattern of the experimental items, and thus prevent the informants from adopting 'response strategies' (Cowart 1997). The fillers made up the majority of the sentences in each questionnaire; each informant rated 28 fillers in addition to the 12 experimental sentences. All the filler sentences included verbs with a –SJA suffix, to make them sufficiently similar to the experimental items. Approximately half of the filler sentences were grammatical and the other half ungrammatical (the grammatical status was determined through a pretest).

The materials were organized in six 'scripts' that differed from each other in the experimental sentences they included (the fillers were identical for all scripts). To balance influences of order, the sentences in each script were randomized by a controlled ordering procedure, so that two different orderings of each script were used.

Procedure:

The questionnaire was conducted through a designated website; the link to the survey was distributed to Russian speakers via email and social media. Each informant was presented with 40 sentences (12

³⁷ The advantage of an experimental design that includes 12 verbs and different types of adjunct phrases is that it allows us to draw more general conclusions, i.e. recognize systematic structural effects, which are not limited to a specific verb or a specific context. For example, some items included episodic time phrases (*segodnja* 'today') while others included generic ones (e.g. *v dožd'* 'when it rains'); this allowed us to check whether the generic / episodic distinction influenced the judgments, and to conclude that this factor does not affect the grammatical status of the DDC.

experimental sentences and 28 fillers), one sentence at a time. S/he had to judge the acceptability of each sentence on a scale of 1-5. The instructions the informants received are presented in Table 3.

Table 3: Instructions (originally in Russian)

Please evaluate the sentences listed below. Imagine that your job is to teach Russian to foreigners, and your student says one of these sentences. Does this sentence sound natural and correct in Russian? Or does it sound weird? You don't need to judge according to 'school' rules of grammar; evaluate the sentence from the point of view of the everyday communication among Russian speakers.
Mark (1) if you think that the sentence is absolutely unnatural and doesn't sound like normal Russian. Mark (5) if you think that the sentence is absolutely natural and proper. If your judgment of the sentence is somewhere between these extremes, mark one of the middle responses (2), (3), or (4). Please do not go back to change your answers, trust your first intuitive reaction.

5.1.3 Results

As mentioned above, each informant rated two items from each experimental condition (i.e. DDC type). For each condition, the median of the two responses was calculated. These median ratings per condition of each informant are (partially) presented in Table 4; for example, informant #1 gave both instances of the negated DDC (condition A) the rating 5; therefore, the median rating of condition A for this informant is 5, as indicated in the cell A-1.

Table 4: Summary of median ratings by informant

Informant	A negated DDC	B adverbial DDC	C 'bare' DDC	D Y/N question	E neg. + null subj.	F adv. + null subj.
1	5	5	5	3	3.5	5
2	4	3.5	2.5	2	3	3
3	5	3.5	1.5	3	3	4
4	4.5	4.5	3.5	2.5	4	5
5	3.5	5	1	1.5	2.5	5
...
89	1.5	1	1	4	2	3.5

Table 5 presents the median scores per DDC type that were calculated from the summary in Table 4. For example, the score 4 for condition A in Table 5 is the median of the 89 values in column A in Table 4; this value is the median acceptability rating that the informants gave to the negated DDC.

Table 5: Median scores per DDC type

	A negated DDC	B adverbial DDC	C 'bare' DDC	D Y/N question	E neg. + null subj.	F adv. + null subj.
Median score	4	4.5	2.5	3	3	4

The results in Table 5 show that experimental conditions A, B, and F received high acceptability ratings (median score of 4-4.5 on a 1-5 scale), meaning that these DDC types (the negated DDC, the adverbial DDC, and the null-subject adverbial DDC, respectively) are perceived by native speakers as grammatical. Condition C received a low acceptability rating (2.5), meaning that the 'bare' DDC is judged by speakers as ungrammatical. Conditions D and E received the score 3, which is the middle value of the response scale. It is not immediately clear how a median score of 3 should be interpreted; to understand this result, the patterns of the ratings were examined more in detail.

Differences in ratings' patterns between the conditions

The informants' median ratings per DDC type (as shown in Table 4 above) were compared using a Wilcoxon signed-rank test. The test compares the patterns of ratings in two samples (i.e. two conditions) and indicates whether there is a significant difference between the distributions of the ratings in these samples. The results of the test (see Table 6 below) show that the ratings for conditions D and E are significantly different both from the ratings for the grammatical conditions A, B, and F (see rows 1 and 3 in Table 6), and from the ratings for the ungrammatical condition C (see rows 2 and 4). No significant differences were found between the distributions of the ratings in the grammatical conditions A, B, and F (see row 5). Thus, the results support treating the DDC types that received a median score 3 as different both from the grammatical DDC types (A, B, and F), and from the ungrammatical DDC type (C).

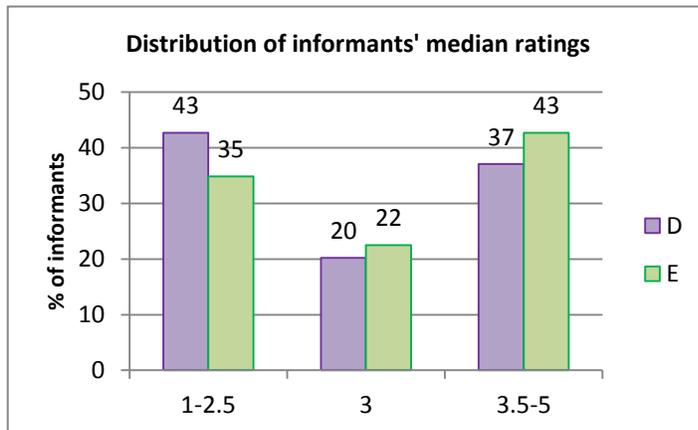
Table 6: Results of Wilcoxon signed-rank test

	The compared paired samples	Significance of the difference (two-tailed)
1	D and A; D and B; D and F	<i>significantly different, $p < .0001$ for all</i>
2	D and C	<i>significantly different, $p = 0.0071$</i>
3	E and A; E and B; E and F	<i>significantly different, $p < .0001$ for all</i>
4	E and C	<i>significantly different, $p < .0001$</i>
5	A and B; A and F; B and F	<i>not significantly different ($p = 0.3628$; $p = 0.4593$; $p = 0.6527$, respectively)</i>

It should be noted, however, that even though conditions D and E both have the median score 3, they do significantly differ from each other in the distribution of the ratings ($p = 0.0238$). To understand the meaning of this difference, the distributions of the ratings in the two conditions were examined further.

Chart 1 below shows how the median ratings for these conditions are distributed between the middle value 3, above it, and below it. In both conditions, for ~20% of the informants the median rating is the middle value 3, but the distribution of ratings around the middle value is reversed. While in condition D, 43% of the informants have a median rating below 3, in condition E, 43% of the informants have a median rating above 3.

Chart 1: Distribution of the informants' median ratings in conditions D and E



This pattern might suggest that despite the similar central tendency, condition E is more acceptable than condition D (i.e. more speakers judge condition E as grammatical, in comparison to condition D).³⁸

However, the crucial fact is that both conditions are neither clearly grammatical nor clearly ungrammatical; therefore, it seems that the difference between them is not linguistically meaningful, despite being statistically significant.

Between-subjects and within-subjects variance

Next, the responses of each informant to the two instances of each condition were examined, as shown in Table 7.

³⁸ This hypothesis is supported by the patterns of informants' responses to the two instances of the same condition, as shown in Table 7 below. Rows 1 and 2 in the table present the percent of the 'consistent' informants, i.e. informants that either rated both instances of a condition as grammatical, or rated them both as ungrammatical. The distribution of the consistent informants is different for the two conditions; while in condition D the number of informants that rated both instances high is roughly the same as the number of informants that rated both instances low (19% and 22%), in condition E there are almost twice as much informants rating both instances high than informants rating both instances low (25% vs. 13%).

Table 7: The patterns of responses to experimental conditions D and E (% of informants)

		D	E
1	a high score (4-5) for both instances	19%	25%
2	a low score (1-2) for both instances	22%	13%
3	a high score for one instance and a low score for the other	26%	29%
4	score 3 for one instance and a high score for the other	16%	13%
5	score 3 for one instance and a low score for the other	15%	15%
6	score 3 for both instances	2%	5%

The patterns of the responses show that the median score 3 in conditions D and E is due to both between-subjects variance (i.e. a situation in which some informants consistently rate a DDC type as acceptable and others consistently rate it as not acceptable) and within-subjects variance (i.e. a situation in which the same informant gives a high score to one instance of an experimental condition and a low score to the other instance of the same condition). In both conditions, around 40% of the informants were consistent in their responses to the two instances, rating both of them either as acceptable (score 4-5) or as unacceptable (score 1-2). Around 30% of the informants rated one instance of the condition acceptable and the other instance as unacceptable; such pattern of response suggests that the informants' judgments were not based on the intended grammatical criterion, i.e. the DDC type. The remaining 30% of the informants gave the rating 3 to one or both instances of conditions D and E; this may indicate that these informants did not have a clear judgment regarding the acceptability of the sentence, and therefore chose the middle value of the response scale. To sum up, the median score 3 observed in conditions D and E reflects both between-subject and within-subject variance in the responses; most informants (60%) did not have a clear and consistent judgment regarding the acceptability of these DDC types.

Possible reasons for the variance

As mentioned above, it seems that in conditions D and E the judgments of most informants are not based on the intended grammatical criterion, namely the DDC type. If the DDC type did not serve as a guiding criterion, it might be that the informants responded randomly or that there were other factors influencing the judgments. In order to check possible reasons for the between-subject variance, the ratings of the 'consistent' informants (rows 1 and 2 in Table 7 above) were tested for possible correlations with demographic characteristics, such as their age, and their current place of residence (Russian / non-Russian speaking country); no correlation was found. However, a significant correlation

($p < .0001$ two-tailed) was found between the ratings in conditions D and E and the informant's overall median rating in the questionnaire (calculated from the responses to all experimental and filler sentences, excluding the relevant condition). This means that informants who gave sentences from conditions D and E a high rating had a consistent tendency to give high ratings throughout the questionnaire, and informants that rated conditions D and E low had a general tendency to rate low. This might suggest that the observed between-subjects variance reflects differences in the way informants use the scale.

A factor that might be responsible for the within-subjects variance is the verb used in the sentence. Table 8 below presents a 'by-item' summary of the ratings. The 'by item' summary allows us to see the median rating for each experimental sentence, calculated from the responses of all the informants that rated the specific sentence. Each row in the table is a token set (i.e. the same verb), the two leftmost columns show the verb used in the token set and its frequency in the language, columns A-F are the experimental conditions. The value in each cell under A-F is the median rating of a specific sentence; for example, the cell 'column A – row 1' shows the median of the responses to the negated DDC (condition A) with the verb *pisat'* 'write' (token set 1).

Table 8: Summary of median ratings by item

Token Set	Verb Frequency (ipm) ³⁹	A	B	C	D	E	F
1- <i>pisat'</i> (write)	444	4.5	5	3	4	4.5	5
2- <i>pet'</i> (sing)	143	5	4	3	3	4	4.5
3- <i>begat'</i> (run)	59	3	4	1	1.5	2	3
4- <i>otdyxat'</i> (rest)	43	3	5	3	2	3.5	5
5- <i>spat'</i> (sleep)	222	5	5	2.5	5	4	5
6- <i>plakat'</i> (cry)	104	3	1	1	1	3	3
7- <i>tancevat'</i> (dance)	42	2	4	1	3	3	3.5
8- <i>guljat'</i> (stroll)	60	4.5	3.5	2.5	3	3	5
9- <i>rabotat'</i> (work)	611	5	5	4	4	4	5
10- <i>čitat'</i> (read)	304	5	5	2	3	3	3.5
11- <i>kurit'</i> (smoke)	66	4	4	1	2	1.5	4
12- <i>dyšat'</i> (breathe)	64	2	2	3	2	3	5

To check whether the frequency of the verb influenced the ratings of the sentences including this verb, a Pearson correlation coefficient was calculated. The coefficient is a measure of the dependence between

³⁹ **ipm** = instances per million words. The frequencies were taken from the online version of Ljaševskaja & Šarov (2009), *Častotnyj Slovar' Sovremennogo Russkogo Jazyka* (Frequency Dictionary of Modern Russian Language), which can be found at <http://dict.ruslang.ru/freq.php?>. The dictionary is based on the Russian National Corpus.

two variables, in our case between verb frequency and the median rating of items in a certain condition. The results are presented in Table 9 below.

Table 9: Pearson correlation coefficient

	A	B	C	D	E	F
Pearson correlation	0.620	0.477	0.595	0.631	0.602	0.323
Significance (two-tailed)	$p=0.032$	$p=0.117$	$p=0.041$	$p=0.028$	$p=0.038$	$p=0.305$

The results show that there is a significant correlation between verb frequency and the median rating items in conditions A, C, D, and E. This seems to suggest that verb frequency plays a role in the grammaticality judgments provided by the informants.⁴⁰ Thus, when informants do not have a clear criterion on which to base their judgments, as we have suggested for conditions D and E, verb frequency might be among the factors influencing their ratings.

Comparison with a hypothetical sample

Finally, the observed patterns of ratings for each condition were compared to a hypothetical sample representing a situation in which the informants do not have a criterion to base their judgments on. Siloni et al. (to appear) argue that when informants do not have a guiding criterion on which to base their judgments, their responses are expected to be either randomly distributed across the scale (i.e. chance distribution of hypothetically 20% per value), or more condensed towards the middle value ('avoiding the edges' strategy); in both cases, the responses should be equally distributed around 3 resulting in a hypothetical median 3. Adopting the procedure used by Siloni et al., the Wilcoxon signed-rank test was used to check the significance of the difference between the distribution of the observed median ratings in each condition and a hypothetical sample in which all the responses have the value 3. The results of the test (see Table 10 below) show that the difference is significant for the grammatical conditions A, B, F (see row 1), and for the ungrammatical condition C (see row 2); however, the difference is not significant for conditions D and E (see row 3). These results support the abovementioned impression that the patterns of responses to conditions D and E are similar to a situation in which the informants respond randomly, without basing their judgment on the intended grammatical criterion.

⁴⁰ It should be noted, however, that there are verbs which scored low in almost all of the conditions, but which are not necessarily less frequent in the language. For example, the verb *plakat'* 'cry' (token set 6) received low ratings (1-3) in all conditions despite the fact that it is quite frequent (104 ipm) relatively to the other verbs; this suggests that this verb is not a suitable input for the DDC. The verb *dyšat'* (breathe) is another example of a verb that is not a good input for the construction (although the null-subject adverbial DDC with it is highly acceptable, which suggests that the expression *Zdes' xorošo dyšitsja* (here well breathe-SJA) is idiomatic).

Table 10: Results of Wilcoxon signed-rank test

The compared paired samples	Significance of the difference (two-tailed)
A and '3'; B and '3'; F and '3'	<i>significantly different, $p < .0001$ for all</i>
C and '3'	<i>significantly different, $p = 0.0011$</i>
D and '3'; E and '3'	<i>not significantly different ($p = 0.2501$; $p = 0.1211$, respectively)</i>

To conclude, Yes/No question DDC (condition D) and null-subject negated DDC (condition E) can be classified neither as grammatical nor as ungrammatical based on the results of the questionnaire. Most informants did not have clear and consistent judgments when presented with sentences of these types. It seems that the judgments regarding these DDC types were not based on the intended criterion; rather, the responses were either random or influenced by factors such as the individual tendency to give high or low ratings, and the specific verb used in the sentence.

The results regarding the other DDC types, on the other hand, are clear. The negated DDC (condition A), the adverbial DDC (condition B), and the null-subject adverbial DDC (condition F) are perceived by speakers as grammatical. The 'bare' DDC (condition C) is perceived as ungrammatical.

5.2 Questionnaire II: Possible Meanings

5.2.1 Introduction

The goal of this survey was to compare the appropriateness ratings for the five meanings presented in Table 11 below; these are the various meanings that are found in the Russian DDC literature, as discussed in section 2.3.1 above. The survey checked the availability of these meanings in the two canonical DDC types: the negated DDC and the adverbial DDC.

Table 11: Putative DDC meanings

	Putative DDC meaning
A	disposition ('feel-like')
B	capability (due to external / physical circumstances)
C	capability (due to psychological circumstances)
D	evaluation of the activity
E	evaluation of the participant's mental state

To elicit judgments regarding the availability of a meaning in a DDC sentence, the following format of questions was used. The informant was directed towards the intended meaning with a short context and a paraphrase; this was followed by a DDC utterance and the task- the informant had to rate (on a

scale of 1-5) the appropriateness of using the given DDC sentence to express the intended meaning in the given situation. An example is shown in Table 12.

Table 12: An example of a question checking the availability of **meaning B** in a **negated DDC**

Context	Grandma has poor eyesight. She wanted to read the newspaper, but her eyes immediately got tired and she stopped reading after the first paragraph.
Paraphrase	Grandma wants to say that <i>she cannot read today</i> . She says:
Utterance	<i>Mne segodnja ne čitaetsja.</i> I _{DAT} today NEG read _{PRESENT.3Sg} -SJA
Task	Your task is to determine whether the sentence “ <i>Mne segodnja ne čitaetsja</i> ” is appropriate for this situation and expresses the meaning that grandma intends. Mark (1) if you think that the sentence is absolutely inappropriate for the situation and/or does not express what the person wants to say. Mark (5) if you think that the sentence is absolutely natural in this situation and expresses exactly what the person wants to say. If your judgment about the sentence is somewhere between these extremes, mark one of the middle responses (2), (3), or (4).

5.2.2 Method

Informants:

The informants were 284 native speakers of Russian, who consider Russian to be the dominant language in their everyday lives. The ages of the informants ranged from 19-80; their education levels ranged from school education to doctorate degrees. 45% of the informants were female, and the rest male.

Materials:

The experimental materials consisted of two token sets, one with the verb *rabotat'* (work) and the other with the verb *čitat'* (read).⁴¹ The verbs *rabotat'* (work) and *čitat'* (read) were chosen based on the results of the grammaticality survey; the negated and the adverbial constructions with these verbs were judged as highly acceptable (a median score of 5; see Table 8 in section 5.1.3 above). Each token set included two DDC utterances, a negated DDC and an adverbial DDC with the adverb *ploxo* ‘badly’, and five ‘contexts’ (for each of the meanings A-E). The utterances and the translations of the contexts are presented in Table 13 below; for the full item list in Russian see Appendix II.

⁴¹ The survey actually included an additional token set, with the verb *spat'* (sleep); however, it was decided to exclude this token set from the analysis, for two reasons. First, it was noticed post factum that an additional factor of variance was inadvertently introduced in this set: the verb appeared in the Past tense (the sentences in the other two token sets, as well as all the sentences tested in Questionnaire I, are in the Present tense). Second, the dispositional meaning (meaning A) received anomalously low scores with items of this token set; for example, the median rating of the appropriateness of meaning A for the negated DDC is 1 with *spat'* (sleep), but 5 with the other two verbs. This suggests that the DDC with *spat'* (sleep) has a ‘frozen’ interpretation (‘I can’t sleep’ / ‘I can’t fall asleep’ / ‘My sleep is bad’). A few native speakers who were consulted after the survey confirmed that this is the only interpretation of a DDC with this verb in the Present tense as well.

Table 13: The DDC utterances and translations of the contexts

	Token set 1	Token set 2
	<i>Mne segodnja ne rabotajetsja.</i> I _{DAT} today NEG work _{PRESENT.3Sg} -SJA	<i>Mne segodnja ne čitaetsja.</i> I _{DAT} today NEG read _{PRESENT.3Sg} -SJA
	<i>Mne segodnja ploxo rabotajetsja.</i> I _{DAT} today badly work _{PRESENT.3Sg} -SJA	<i>Mne segodnja ploxo čitaetsja.</i> I _{DAT} today badly read _{PRESENT.3Sg} -SJA
A	Sasha is in her office. She is not in the mood for work today, so she’s “hanging out” in the internet and looking for something interesting. Sasha wants to say that <i>she doesn’t feel like working today</i> . She says:	Anna likes reading books in the evenings. But today she is not in the mood for reading, so she is watching movies instead. Anna wants to say that <i>she doesn't feel like reading today</i> . She says:
B	Tania is in her office. There is a horrible noise outside. She’s trying to make phone calls to clients, but it’s impossible to hear anything. Tania wants to say that <i>she cannot work today</i> . She says:	Grandma has poor eyesight. She wanted to read the newspaper, but her eyes immediately got tired and she stopped reading after the first paragraph. Grandma wants to say that <i>she cannot read today</i> . She says:
C	Yanna is upset because yesterday she had a fight with her friend. She is sitting in her office, staring outside the window and thinking about the fight. Yanna wants to say that <i>she cannot work today</i> . She says:	Natasha is very excited because tomorrow her boyfriend is coming back from a long trip. She is trying to read a book, but can only think about the long-awaited reunion. Natasha wants to say that <i>she cannot read today</i> . She says:
D	Yulia is working on an important project. She feels that today work is going very slowly and she is making a lot of mistakes. Yulia wants to say that <i>her work is going badly today</i> . She says:	Diana is a student. Today she is studying in the library; she feels that she is not concentrated and she has to read every paragraph 3 times. Diana wants to say that <i>her reading is going badly today</i> . She says:
E	Today Dasha is doing very technical and monotonous work. She is bored and miserable. Dasha wants to say that <i>she doesn’t enjoy her work today</i> . She says:	Luba is a student. Today she is reading a paper for a course she’s taking. The paper is not interesting at all, and Luba feels bored. Luba wants to say that <i>she doesn't enjoy her reading today</i> . She says:

Each of the contexts A-E was paired both with the negated DDC and with the adverbial one, forming ten experimental conditions (A_neg, A_adv, B_neg, B_adv, etc.). The choice to use the adverb *ploxo* (badly) in the adverbial construction enabled us to use the same context and paraphrase for the two DDC types, thus minimizing variance and allowing us to test whether there are differences in the interpretations available for each type, as has been proposed by some authors (see section 2.3.1).

Each informant rated 10 experimental sentences, each representing one of the 10 experimental conditions mentioned above. The experimental sentences belonged to different token sets (one third of the items from each of the three token sets). In addition, the questionnaires included 8 ‘fillers’; the fillers were in the same format as the experimental items and the utterances used in them featured verbs with a –SJA suffix. In half of the fillers, the utterance was appropriate to express the intended meaning, and in the other half it was inappropriate.⁴²

The materials were organized in three ‘scripts’ that differed from each other in the experimental sentences they included (the fillers were identical for all scripts). To balance influences of order, the sentences in each script were randomized by a controlled ordering procedure, so that two different orderings of each script were used.

Procedure:

The questionnaire was conducted through a designated website; the link to the survey was distributed to Russian speakers via email and social media. Each informant was presented with 18 items (10 experimental sentences and 8 fillers), one item at a time. S/he had to judge the appropriateness of using the DDC utterance to express the given meaning on a scale of 1-5, according to the instructions presented in Table 12 above.

5.2.3 Results

Table 14 below presents the median scores per experimental condition, as calculated from the responses to items from Token Set 1 and Token Set 2 (the responses to items from Token Set 3 were excluded, see fn. 40 above). For example, the score 5 for meaning A in the ‘negated DDC’ column is the median of the ratings that 197 informants gave to one of the two representatives of the A_neg experimental condition (as mentioned above, each informant rated one instance of each experimental condition).

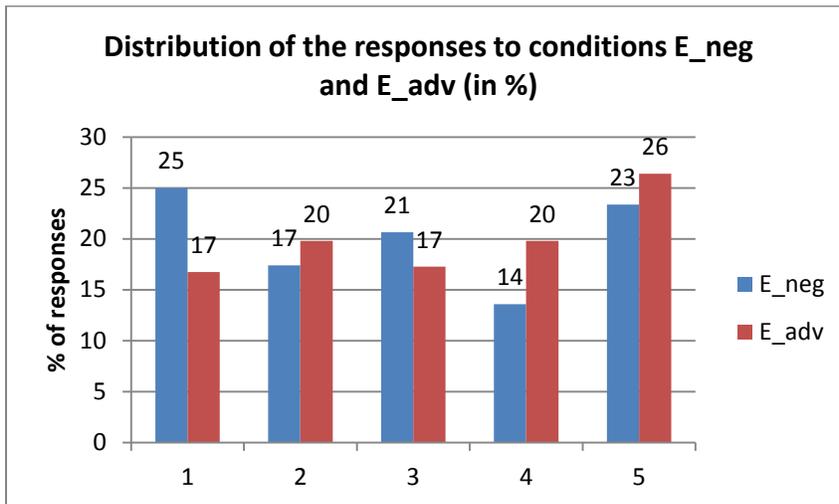
⁴² For example, a sentence with a passive –SJA verb was paired once with a meaning in which an implicit agent is entailed (appropriate) and once with a ‘by itself’ meaning (inappropriate). The same two types of meanings were also paired with a sentence with an unaccusative –SJA verb; in this case the ‘by itself’ meaning is appropriate while the ‘implicit agent’ meaning is not.

Table 14: Median ratings: the appropriateness of using a negated/adverbial DDC to express a meaning

	negated DDC	adverbial DDC
A: disposition ('feel-like')	5	4
B: capability (due to external / physical circumstances)	2	2
C: capability (due to psychological circumstances)	5	4
D: evaluation of the activity	5	5
E: evaluation of the participant's mental state	3	3

The results show that both the negated and the adverbial DDC's are appropriate to express the meanings A, C, and D (median score 4-5 on a 1-5 scale). Both types of the DDC cannot express meaning B (median score 2). As for meaning E, both DDC types received the median score 3, the middle value of the response scale. Chart II below presents the distribution of the responses to the conditions involving this meaning (E_neg and E_adv); as evident, the responses are distributed almost evenly across the scale, ~20% of the responses per each value. Such distribution suggests either that there is a great between-subject variance regarding the availability of meaning E for the DDC, or that the informants responded randomly to these conditions (on a 1-5 scale, chance distribution is expected to be 20% per value).⁴³

Chart II: Distribution of the responses to experimental conditions E_neg and E_adv (in %)



The procedure used by Siloni et al. (to appear) was applied here as well; the Wilcoxon signed-rank test was used to check the significance of the difference between the distribution of actual ratings in each

⁴³ The design of the experiment does not allow us to check for within-subject variance, since each informant rated only one instance of each condition.

condition and a hypothetical sample in which all the responses have the value 3. The results are presented in Table 15; the difference was significant for all experimental conditions except for E_neg and E_adv. This supports the hypothesis that informants responded to the latter conditions randomly.

Table 15: Results of Wilcoxon signed-rank test

The compared paired samples	Significance of the difference (two-tailed)
A_neg and '3'; A_adv and '3'	<i>significantly different</i> ($p < .0001$ and $p = 0.0164$, respectively)
B_neg and '3'; B_adv and '3'	<i>significantly different</i> ($p < .0001$ and $p = 0.0003$, respectively)
C_neg and '3'; C_adv and '3'	<i>significantly different</i> , $p < .0001$ for both
D_neg and '3'; D_adv and '3'	<i>significantly different</i> , $p < .0001$ for both
E_neg and '3'; E_adv and '3'	<i>not significantly different</i> ($p = 0.6171$ and $p = 0.0574$, respectively) ⁴⁴

To sum up, the results of the survey show that both the negated DDC and the adverbial DDC are appropriate to express the following meanings: disposition to perform the activity, capability to perform the activity (due to psychological circumstances), evaluation of how the activity is going; both DDC types cannot be used to express capability to perform the activity due to physical or external circumstances. The informants did not have clear judgments regarding the possibility to use the DDC to express evaluation of the participant's mental state during the activity.

⁴⁴ The p value for E_adv is borderline; I consider the difference non-significant since for the other conditions the difference was a lot more pronounced (i.e. the p value is a lot lower).

6. Conclusion

The first goal of this study was to resolve some controversial issues regarding the descriptive characteristics of the Russian DDC. This goal was addressed through the two surveys conducted as part of this study; *Questionnaire I* systematically collected grammaticality judgments regarding different environments licensing the Russian DDC, and *Questionnaire II* investigated the interpretations available for it.

The main conclusion from the first questionnaire was that the Russian variant of the DDC necessarily involves an adverb or negation; the 'bare' type of the construction, which is available in other Slavic languages such as Slovenian and Bulgarian, is ungrammatical in Russian. This means that an adequate analysis of the construction has to explain the role of the mandatory adverb or negation in it, as well as account for the crosslinguistic variation within the family of Slavic languages regarding this property. The analysis proposed in this study addressed both issues, as discussed below.

The results of the second questionnaire revealed that the Russian DDC has two types of meaning: it can express either a subjective evaluation regarding a factual eventuality (i.e. '*X feels that Y is going well / badly / easily / ...*'), or a disposition towards the possibility to participate in a potential eventuality (i.e. '*X feels / doesn't feel like doing Y*' or '*X feels that in view of her psychological circumstances, she can / cannot Y*'). Moreover, the results show that the two meanings are available for both the negated DDC and the adverbial DDC (at least with a negative adverb like *ploxo* 'badly'). These findings have consequences for certain proposals found in the literature, specifically the claim that the dispositional meaning is not available for the adverbial DDC (Fici (unknown), Marušič and Žaucer 2006, Rivero and Arregui 2012), and the view that 'factual' DDC's, which describe a mental state regarding an actual eventuality, do not coexist in one language with 'feel-like' DDC's, which do not imply an actual eventuality (Rivero and Arregui 2012). In addition, the results of the questionnaire strongly support the view that the Russian DDC is specialized for psychological circumstances, and cannot be used to describe (in-)capability to perform an activity due to physical or external reasons (Benedicto 1995).

The second goal of the study was to propose how the DDC alternate is derived from the corresponding verb. To address this issue, a few aspects of the derivational process that creates the DDC were examined. First, a closer investigation of the verbs that can and cannot serve as input for the DDC formation was conducted. In the existing literature, the input has been commonly defined as the set of unergative verbs, i.e. intransitives with an external argument (e.g. Schoorlemmer 1993, Franks 1995); however, I showed that this definition is not accurate, since there are types of unergatives that cannot feed the construction: emission verbs, reflexives, reciprocals, and Subject-Experiencer verbs. Based on

these findings, I argued that the formation operation is sensitive to the theta-role of the argument, rather than to its external mapping. The generalization regarding the relevant theta-role could not be easily formulated under the traditional view of theta-roles as atomic primitives (e.g. Agent, Experiencer, etc.); therefore, I adopted a framework that views theta-roles as clusters comprising two binary features: +/- *C* (cause change) and +/- *M* (mental state). Within this framework, known as the Theta System (Reinhart 2002, Everaert, Marelj, and Siloni 2012), the generalization regarding the input for the DDC formation is straightforward; the formation process is sensitive to a natural class of theta-roles: [+]
clusters, i.e. clusters comprising only positively valued features. Thus, the data presented in this study regarding the input for the Russian DDC lend additional support to the view that theta-roles are not primitives and that [+]
clusters constitute a natural class of theta-roles (Reinhart 2002).

Moreover, the revised definition of the input for the DDC formation process has consequences for the controversy around the division of labor between the lexicon and the syntax. Many recent analyses (e.g. Benedicto 1995, Marušič and Žaucer 2006, Rivero and Arregui 2012) derive the DDC syntactically, via insertion of a functional head or a null predicate above the VP headed by the input verb. However, a syntactic formation process cannot account for the abovementioned restriction on the input, since the feature composition of theta-roles is not accessible in the syntax. Furthermore, under the analyses that derive the DDC by adding structure *above* the base VP, it is expected to be possible to detect the input verb and its argument in the structure; however, I showed that various diagnostics fail to detect the presence of these elements in the Russian construction. Thus, the revised definition of the input and the results of these diagnostics strongly indicate that the Russian DDC is created in the lexicon. The operation deriving the DDC alternate modifies the input verb and its theta-role, so that the resulting lexical entry denotes a psychological state, and its theta-role is the Experiencer cluster [-c+m]. The mandatory adverb or negation is needed in order to qualify the psychological state as either positive or negative. The analysis provides support for the view of the lexicon as an active component of grammar, where operations can apply (e.g. Siloni 2002, Reinhart and Siloni 2005, Horvath and Siloni 2008, Horvath and Siloni 2010), as opposed to syntactocentric approaches to grammar, which restrict all derivational processes to the syntactic module (e.g. Marantz 1997, Borer 2004, Pyllkanen 2008).

The locus of the derivation might also be the source of the differences between the Russian DDC and the seemingly parallel constructions in other Slavic languages. As mentioned above, one such difference is the availability of the 'bare' variant observed in the South Slavic languages. Another difference discussed in this study is that both South Slavic and West Slavic languages seem to allow semantically incompatible adverbials in their structure, in contrast to Russian; this behavior is compatible with the syntactic

analyses mentioned above, since they argue for the existence of two heads in the DDC structure (the input V and the ‘modal’ head above it), each of which can be modified by a different adverb. Since this study focused on the Russian construction, I provided evidence for its lexical formation, but I did not conduct a systematic crosslinguistic comparison that could provide clear evidence regarding other languages; such comparison is left for future research. Further investigation of the hypothesis that the DDC is created syntactically in other Slavic languages should look into the input for the formation process, focusing specifically on whether the process is sensitive to the thematic information of the input verb; showing that the DDC formation in these languages is not limited the way it is in Russian would support the hypothesis that the process is syntactic. In addition, further diagnostics detecting the presence of the input verb and its argument should be applied; for example, showing that agenthood diagnostics detect the original verb’s theta-role in the DDC would support a syntactic derivation. The hypothesis that the observed variations between the properties of the DDC across Slavic languages are related to the locus of the derivation seems a promising direction also in view of existing proposals in the literature. Reinhart and Siloni (2005) and Siloni (2012) argue that universal operations (e.g. *reflexivization* and *reciprocalization*) are subject to the *Lexicon-Syntax Parameter*, meaning that they can apply either in the lexicon or post-lexically, depending on the setting of the parameter. This proposal is based on the observation that there are systematic differences in clusters of properties exhibited by reflexive and reciprocal verbs in various languages. Hron (2012) demonstrates that the clusters of properties are attested among Slavic languages as well, and suggests that South Slavic and West Slavic are ‘syntax’ languages, while East Slavic languages (including Russian) have a ‘lexicon’ setting. The division also correlates with the morphological inventory of the languages; in the East Slavic, reflexive and reciprocal verbs are created via the –SJA suffix, while in the South Slavic and the West Slavic languages, the clitic SE is involved. The findings regarding the Russian DDC presented in this study contribute new evidence, from another derivational operation involving –SJA, in support of the classification of Russian as a ‘lexicon’ language.

Appendix I: Distinguishing the DDC from similar constructions

The verbal alternation discussed in this study involves an active derivation with a Nominative argument and a verb without –SJA, and a derivation in which the argument is Dative and the verb is suffixed with –SJA (the DDC). There are additional constructions in Russian that involve a similar alternation between a derivation of the type $NP_{NOM} + V (+ \dots)$ and a derivation of the type $NP_{DAT} + V\text{-SJA} (+ \dots)$; nonetheless, these constructions are considered distinct from the DDC because they do not exhibit the semantic effect that is characteristic of the latter. In this appendix, I present examples of such constructions and show how they differ semantically from the DDC; for a more detailed survey, the reader is referred to Gerritsen (1990).

Verbs like *videt'* (see), *slyšat'* (hear), *vspominat'* (recall), *voobražat'* (imagine), and *predstavljat'* (imagine, picture) have the argument structure of an Experiencer and a Theme. In their active derivation, the Experiencer is Nominative and the Theme is Accusative (see (71a)); in their V-SJA derivation, the Experiencer appears with the Dative case and the Theme with the Nominative (see (71b)).

71. (a) **Ja slyšu tvoj golos.**

I_{NOM} hear_{PRESENT.1Sg} your voice_{ACC}

'I hear your voice'

(b) **Mne slyšitsja tvoj golos.**

I_{DAT} hear_{PRESENT.3Sg-SJA} your voice_{NOM}

'I hear your voice'

Other verbs, with an argument structure of Experiencer and Subject Matter, show the alternation as well.⁴⁵ The difference between this alternation and the one in (71) above is that the Subject Matter argument does not alternate between Nominative and Accusative in the two derivations, but rather is realized by a prepositional phrase or an infinitival clause in both. The verbs *mečtat'* (dream) and *dumat'* (think) are examples of the former (see (72)), and the verb *xotet'* (want) is an example of the latter (see (73)).

⁴⁵ The theta-role 'Subject Matter of Emotion' is discussed by Pesetsky (1995); he attributes this role to the objects of verbs like 'worry' and 'fear'. The meaning of this role is: whenever the Experiencer argument experiences the emotion denoted by the verb, s/he is thinking in some way about the Subject Matter argument.

72. (a) **Ja často mečtaju o more.**

I_{NOM} often dream_{PRESENT.1Sg} about sea_{PREP}

'I often dream of the sea'

(b) **Mne často mečtajetsja o more.**

I_{DAT} often dream_{PRESENT.3Sg-SJA} about sea_{PREP}

'I often dream of the sea'

73. (a) **Ja xoču spat'.**

I_{NOM} want_{PRESENT.1Sg} sleep_{INF}

'I want to sleep'

(b) **Mne xočetsja spat'.**

I_{DAT} want_{PRESENT.3Sg-SJA} sleep_{INF}

'I want to sleep' / 'I feel like sleeping'

As evident from the translations of (71)-(73), the two derivations are almost synonymous for these verbs; they both describe a mental process, experienced in the (a) examples by the Nominative argument and in the (b) examples by the Dative argument. The difference between the derivation with V and the derivation with V-SJA is that the latter expresses lack of control on the part of the Experiencer, meaning that in the (b) examples the mental process is understood as more spontaneous and less intended (see e.g. Gerritsen 1990, Dabrowska 1994). This effect is very different from the one observed in the 'basic' vs. the 'DDC' derivations; as has been discussed above, the former denotes an activity (e.g. work) or a physical state (e.g. sleep), while the latter denotes a psychological state: a disposition or evaluation regarding the event denoted by the basic derivation. In other words, the basic/DDC alternation involves a shift in the interpretation of the verb: the DDC alternate does not denote the same eventuality as the basic alternate. Such meaning shift does not happen in the constructions illustrated in (71)-(73), where the verb has the same meaning in both alternates.

Another alternation that structurally resembles the DDC is possible for intransitives such as *ikat'* (hiccup), *čixat'* (sneeze), and *zevat'* (yawn); they also have a derivation with V and a Nominative noun phrase (see (74a)) and a derivation with V-SJA and a Dative noun phrase (see (74b)). These verbs denote 'reflex acts' in their basic derivation, and the interpretation of the V-SJA alternate is "to feel that one has to V, to feel a stimulus to V" (Gerritsen 1990). This semantic effect is also clearly distinct from the one exhibited by the active/DDC alternation, since the V-SJA alternate describes a physical sensation rather than a psychological state.

74. (a) **Ja ikaju.**

I_{NOM} hiccup_{PRESENT.1Sg}

'I'm hiccupping'

(b) **Mne ikajetsja.**

I_{DAT} hiccup_{PRESENT.3Sg-SJA}

'I have to hiccup'

To conclude, the alternation between a derivation of the type $NP_{NOM} + V (+ \dots)$ and a derivation of the type $NP_{DAT} + V-SJA (+ \dots)$ can have a few different (possibly related, see Gerritsen 1990) semantic effects in Russian. This study dealt with one specific semantic effect, in which the derivation with V describes an activity (e.g. *work, dance*) or a physical state (e.g. *sleep, sit*), and the derivation with V-SJA describes a *psychological state* related to this activity / physical state. Thus, alternations of the types illustrated in (71)-(74) above were excluded from the discussion.⁴⁶

⁴⁶ Another possible difference between the DDC and the constructions in (71)-(74) is the productivity of the alternation. As mentioned in section 3.3.1, the DDC is a productive alternation: any intransitive (or object-drop transitive) verb with a suitable argument structure (a [+] cluster) can form a DDC. It is not clear, however, how productive the alternations discussed in this appendix are; for example, verbs like *ljubit'* 'love' and *nenavidit'* 'hate' seem to have the same argument structure as the abovementioned *vspominat'* 'recall' and *voobražat'* 'imagine': an Experiencer (realized in the Nominative) and a Theme (realized in the Accusative), but they do not have a V-SJA alternate.

Appendix II: Full Item Lists for Questionnaires I and II

Questionnaire I

Token Set 1

	pronominal subject	null subject
negated DDC	<i>Mne nočju ne pišetsja.</i> I _{DAT} at night NEG write _{PRESENT.3Sg} -SJA	<i>V etoj komnate ne pišetsja.</i> in this room NEG write _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne nočju xorošo pišetsja.</i> I _{DAT} at night well write _{PRESENT.3Sg} -SJA	<i>V etoj komnate xorošo pišetsja.</i> in this room well write _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne nočju pišetsja.</i> I _{DAT} at night write _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe nočju pišetsja?</i> YOU _{DAT} at night write _{PRESENT.3Sg} -SJA	

Token Set 2

	pronominal subject	null subject
negated DDC	<i>Mne segodnja ne pojetsja.</i> I _{DAT} today NEG sing _{PRESENT.3Sg} -SJA	<i>Zdes' ne pojetsja.</i> here NEG sing _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne segodnja xorošo pojetsja.</i> I _{DAT} today well sing _{PRESENT.3Sg} -SJA	<i>Zdes' xorošo pojetsja.</i> here well sing _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne segodnja pojetsja.</i> I _{DAT} today sing _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe segodnja pojetsja?</i> you _{DAT} today sing _{PRESENT.3Sg} -SJA	

Token Set 3

	pronominal subject	null subject
negated DDC	<i>Mne segodnja ne begajetsja.</i> I _{DAT} today NEG run _{PRESENT.3Sg} -SJA	<i>Zdes' ne begajetsja.</i> here NEG run _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne segodnja xorošo begajetsja.</i> I _{DAT} today well run _{PRESENT.3Sg} -SJA	<i>Zdes' xorošo begajetsja.</i> here well run _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne segodnja begajetsja.</i> I _{DAT} today run _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe segodnja begajetsja?</i> YOU _{DAT} today run _{PRESENT.3Sg} -SJA	

Token Set 4

	pronominal subject	null subject
negated DDC	<i>Mne letom ne otdyxajetsja.</i> I _{DAT} in summer NEG rest _{PRESENT.3Sg} -SJA	<i>Na etoj dače ne otdyxajetsja.</i> on this cottage NEG rest _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne letom xorošo otdyxajetsja.</i> I _{DAT} in summer well rest _{PRESENT.3Sg} -SJA	<i>Na etoj dače xorošo otdyxajetsja.</i> on this cottage well rest _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne letom otdyxajetsja.</i> I _{DAT} in summer rest _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe letom otdyxajetsja?</i> you _{DAT} in summer rest _{PRESENT.3Sg} -SJA	

Token Set 5

	pronominal subject	null subject
negated DDC	<i>Mne v žaru ne spitsja.</i> I _{DAT} in heat NEG sleep _{PRESENT.3Sg} -SJA	<i>V etoj gostinice ne spitsja.</i> in this hotel NEG sleep _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne v žaru xorošo spitsja.</i> I _{DAT} in heat well sleep _{PRESENT.3Sg} -SJA	<i>V etoj gostinice xorošo spitsja.</i> in this hotel well sleep _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne v žaru spitsja.</i> I _{DAT} in heat sleep _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe v žaru spitsja?</i> you _{DAT} in heat sleep _{PRESENT.3Sg} -SJA	

Token Set 6

	pronominal subject	null subject
negated DDC	<i>Mne segodnja ne plačetsja.</i> I _{DAT} today NEG cry _{PRESENT.3Sg} -SJA	<i>Zdes' ne plačetsja.</i> here NEG cry _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne segodnja xorošo plačetsja.</i> I _{DAT} today well cry _{PRESENT.3Sg} -SJA	<i>Zdes' xorošo plačetsja.</i> here well cry _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne segodnja plačetsja.</i> I _{DAT} today cry _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe segodnja plačetsja?</i> you _{DAT} today cry _{PRESENT.3Sg} -SJA	

Token Set 7

	pronominal subject	null subject
negated DDC	<i>Mne segodnja ne tancujetsja.</i> I _{DAT} today NEG dance _{PRESENT.3Sg} -SJA	<i>Zdes' ne tancujetsja.</i> here NEG dance _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne segodnja xorošo tancujetsja.</i> I _{DAT} today well dance _{PRESENT.3Sg} -SJA	<i>Zdes' xorošo tancujetsja.</i> here well dance _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne segodnja tancujetsja.</i> I _{DAT} today dance _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe segodnja tancujetsja?</i> you _{DAT} today dance _{PRESENT.3Sg} -SJA	

Token Set 8

	pronominal subject	null subject
negated DDC	<i>Mne v dožd' ne guljajetsja.</i> I _{DAT} in rain NEG stroll _{PRESENT.3Sg} -SJA	<i>V etom parke ne guljajetsja.</i> in this park NEG stroll _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne v dožd' xorošo guljajetsja.</i> I _{DAT} in rain well stroll _{PRESENT.3Sg} -SJA	<i>V etom parke xorošo guljajetsja.</i> in this park well stroll _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne v dožd' guljajetsja.</i> I _{DAT} in rain stroll _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe v dožd' guljajetsja?</i> you _{DAT} in rain stroll _{PRESENT.3Sg} -SJA	

Token Set 9

	pronominal subject	null subject
negated DDC	<i>Mne segodnja ne rabotajetsja.</i> I _{DAT} today NEG work _{PRESENT.3Sg} -SJA	<i>V etom ofise ne rabotajetsja.</i> in this office NEG work _{PRESENT.3Sg} -SJA
adverbial DDC	<i>Mne segodnja xorošo rabotajetsja.</i> I _{DAT} today well work _{PRESENT.3Sg} -SJA	<i>V etom ofise xorošo rabotajetsja.</i> in this office well work _{PRESENT.3Sg} -SJA
'bare' DDC	<i>Mne segodnja rabotajetsja.</i> I _{DAT} today work _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	<i>Tebe segodnja rabotajetsja?</i> you _{DAT} today work _{PRESENT.3Sg} -SJA	

Token Set 10

	pronominal subject	null subject
negated DDC	Mne nočju ne čitaetsja. I _{DAT} at night NEG read _{PRESENT.3Sg} -SJA	V etoj biblioteke ne čitaetsja. in this library NEG read _{PRESENT.3Sg} -SJA
adverbial DDC	Mne nočju xorošo čitaetsja. I _{DAT} at night well read _{PRESENT.3Sg} -SJA	V etoj biblioteke xorošo čitaetsja. in this library well read _{PRESENT.3Sg} -SJA
'bare' DDC	Mne nočju čitaetsja. I _{DAT} at night read _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	Tebe nočju čitaetsja? you _{DAT} at night read _{PRESENT.3Sg} -SJA	

Token Set 11

	pronominal subject	null subject
negated DDC	Mne v žaru ne kuritsja. I _{DAT} in heat NEG smoke _{PRESENT.3Sg} -SJA	Zdes' ne kuritsja. here NEG smoke _{PRESENT.3Sg} -SJA
adverbial DDC	Mne v žaru xorošo kuritsja. I _{DAT} in heat well smoke _{PRESENT.3Sg} -SJA	Zdes' xorošo kuritsja. here well smoke _{PRESENT.3Sg} -SJA
'bare' DDC	Mne v žaru kuritsja. I _{DAT} in heat smoke _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	Tebe v žaru kuritsja? you _{DAT} in heat smoke _{PRESENT.3Sg} -SJA	

Token Set 12

	pronominal subject	null subject
negated DDC	Mne segodnja ne dyšitsja. I _{DAT} today NEG breathe _{PRESENT.3Sg} -SJA	Zdes' ne dyšitsja. here NEG breathe _{PRESENT.3Sg} -SJA
adverbial DDC	Mne segodnja xorošo dyšitsja. I _{DAT} today well breathe _{PRESENT.3Sg} -SJA	Zdes' xorošo dyšitsja. here well breathe _{PRESENT.3Sg} -SJA
'bare' DDC	Mne segodnja dyšitsja. I _{DAT} today breathe _{PRESENT.3Sg} -SJA	
Y/N quest. DDC	Tebe segodnja dyšitsja? you _{DAT} today breathe _{PRESENT.3Sg} -SJA	

Questionnaire II

Token Set 1

adv	<i>Mne segodnja ploxo rabotajetsja.</i> I _{DAT} today badly work _{PRESENT.3SG} -SJA
neg	<i>Mne segodnja ne rabotajetsja.</i> I _{DAT} today NEG work _{PRESENT.3SG} -SJA

	English	Russian
A	Sasha is in her office. She is not in the mood for work today, so she's "hanging" in the internet and looking for something interesting. Sasha wants to say that she doesn't feel like working today . She says:	Саша в своем офисе. Сегодня у нее нет настроения работать, поэтому она «сидит» в интернете и выискивает что-нибудь интересное. Саша хочет сказать, что ей не хочется работать сегодня . Она говорит:
B	Tania is in her office. There is a horrible noise outside. She's trying to make phone calls to clients, but it's impossible to hear anything. Tania wants to say that she cannot work today . She says:	Таня в своем офисе. Снаружи доносится ужасный шум. Она в это время пытается говорить с клиентами по телефону, но это невозможно. Ничего не слышно. Таня хочет сказать, что она сегодня не может работать . Она говорит:
C	Yanna is upset because yesterday she had a fight with her friend. She is sitting in her office, staring outside the window and thinking about the fight. Yanna wants to say that she cannot work today . She says:	Янна расстроена из-за того, что вчера поссорилась со своей подругой. Она сидит в своем офисе, смотрит в окно и думает об этой ссоре. Янна хочет сказать, что она сегодня не может работать . Она говорит:
D	Yulia is working on an important project. She feels that today work is going very slowly and she is making a lot of mistakes. Yulia wants to say that her work is going badly today . She says:	Юля работает над очень важным проектом. Она чувствует, что работа сегодня продвигается очень медленно и она делает много ошибок. Юля хочет сказать, что сегодня у нее плохо идет работа . Она говорит:
E	Today Dasha is doing very technical and monotonous work. She is bored and miserable. Dasha wants to say that she doesn't enjoy her work today . She says:	Сегодня Даша делает монотонную техническую работу. Ей скучно и тоскливо. Даша хочет сказать, что она не получает удовольствия от работы сегодня . Она говорит:

Token Set 2

adv	<i>Mne segodnja ploxо čitaetsja.</i> I _{DAT} today badly read _{PRESENT.3sg} -SJA
neg	<i>Mne segodnja ne čitaetsja.</i> I _{DAT} today NEG read _{PRESENT.3sg} -SJA

	English	Russian
A	Anna likes reading books in the evenings. But today she is not in the mood for reading, so she is watching movies instead. Anna wants to say that she doesn't feel like reading today . She says:	Анна любит читать книги по вечерам. Но сегодня у нее нет настроения читать и поэтому она смотрит фильмы. Анна хочет сказать, что ей не хочется сегодня читать . Она говорит:
B	Grandma has poor eyesight. She wanted to read the newspaper, but her eyes immediately got tired and she stopped reading after the first paragraph. Grandma wants to say that she cannot read today . She says:	У бабушки плохое зрение. Она хотела почитать газету, но глаза быстро устали, и она отложила ее после первого абзаца. Бабушка хочет сказать, что она не может сегодня читать . Она говорит:
C	Natasha is very excited because tomorrow her boyfriend is coming back from a long trip. She is trying to read a book, but can only think about the long-awaited reunion. Natasha wants to say that she cannot read today . She says:	Наташа очень взволнованна, потому что завтра ее друг возвращается из путешествия. Она пытается читать книгу, но думает только о долгожданной встрече. Наташа хочет сказать, что она сегодня не может читать . Она говорит:
D	Diana is a student. Today she is studying in the library; she feels that she is not concentrated and she has to read every paragraph 3 times. Diana wants to say that her reading is going badly today . She says:	Диана – студентка. Она готовится к занятиям в библиотеке и чувствует, что сегодня что-то ее отвлекает и она читает каждый параграф по три раза. Диана хочет сказать, что чтение у нее плохо идет сегодня . Она говорит:
E	Luba is a student. Today she is reading a paper for a course she's taking. The paper is not interesting at all, and Luba feels bored. Luba wants to say that she doesn't enjoy her reading today . She says:	Люба – студентка. Сегодня она читает статью для курса. Статья очень неинтересная, и Любе скучно. Люба хочет сказать, что она не получает удовольствия от чтения сегодня . Она говорит:

Token Set 3

adv	<i>Mne včera ploxo spalos'.</i> I _{DAT} yesterday badly sleep _{PAST.Sg.NEU} -SJA
neg	<i>Mne včera ne spalos'.</i> I _{DAT} yesterday NEG sleep _{PAST.Sg.NEU} -SJA

	English	Russian
A	Yesterday Olga celebrated her birthday with some friends in a night club. At 3 AM her friends got tired and wanted to go home, but Olga wanted to continue dancing. Olga wants to say that she didn't feel like sleeping yesterday . She says:	Вчера Ольга праздновала свой день рождения с друзьями в ночном клубе. В три часа утра ее друзья устали и засобирались домой, но Ольга хотела продолжать танцевать. Ольга хочет сказать, что ей вчера не хотелось спать . Она говорит:
B	Yesterday night, Lena's neighbors were having a fight. They were screaming at each other and throwing things. Lena was lying awake all night because of all the noise. Lena wants to say that she couldn't sleep yesterday . She says:	Вчера ночью соседи Лены ссорились. Они кричали и бросали вещи. Лена не спала всю ночь из-за шума. Лена хочет сказать, что она вчера не могла спать . Она говорит:
C	Yesterday Zina had a fight with her friend. It upset her very much, and she was lying awake all night. Zina wants to say that she couldn't sleep yesterday . She says:	Вчера Зина поссорилась с подругой. Это ее сильно расстроило и она не спала всю ночь. Зина хочет сказать, что она вчера не могла спать . Она говорит:
D	Yesterday Marina slept very poorly. She woke up many times during the night and it took her a long time to fall asleep again. Marina wants to say that her sleep was bad and restless yesterday . She says:	Вчера Марина плохо спала. Она просыпалась много раз за ночь и долго не могла снова уснуть. Марина хочет сказать, что ее сон вчера был беспокойный и мятельный . Она говорит:
E	Yesterday Katya slept in a 5-stars hotel. The bed was very comfortable, but she had horrible nightmares the whole night. Katya wants to say that she didn't enjoy her sleep yesterday . She says:	Вчера Катя спала в 5-звездочном отеле. Кровать была очень удобной, но всю ночь ей снились кошмары. Катя хочет сказать, что она не получила удовольствия от сна вчера . Она говорит:

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אחד הנושאים המרכזיים בהם עוסקת הבלשנות התאורטית הוא חקר האלטרנציות הפעליות, כלומר- מימושים שונים של אותו קונסטרוקט פעלי והקשרים הגזירתיים ביניהם. בתזה זו, אני חוקרת את הגרסה הרוסית של מבנה בשם Dative Dispositional Construction (DDC), אשר מודגם ב- (i). ה- DDC הוא מימוש פעלי הקיים עבור פעלים עומדים מסוימים, שלהם גם מימוש 'רגיל' כמו ב- (ii).

(i) *Mne ne rabotaetsja.*

I_{DAT} NEG work_{PRESENT.3sg}-SJA

'לא מתחשק לי לעבוד' / 'אני לא יכולה לעבוד' / 'אני מרגישה/ שהעבודה הולכת לי רע'

(ii) *Ja (ne) rabotaju.*

I_{NOM} NEG work_{PRESENT.1sg}

'אני (לא) עובד/ת'

בעבודה זו מוצגים ממצאים חדשים אשר תורמים להבנה טובה יותר של ה- DDC הרוסי. כחלק מהמחקר, הועברו שני שאלונים לדוברים ילידיים של רוסית: הראשון אסף באופן שיטתי שיפוטי דקדוקיות לגבי סוגים שונים של המבנה, והשני בחן את הפירושים האפשריים שלו. תוצאות השאלונים מיישבות מספר מחלוקות אשר היו קיימות בספרות קודמת על הנושא. למשל, הן מראות שהמבנה הרוסי אינו דקדוקי ללא תואר-פועל או שלילה ושהוא מבטא או הערכה סובייקטיבית לגבי ארוע אמיתי (לדוגמה- 'אני מרגישה/ שהעבודה הולכת לי רע', כלומר- 'אני עובד/ת ומעריכה את הארוע כשלילי'), או נטיה (disposition) לגבי האפשרות להשתתף בארוע פוטנציאלי (לדוגמה- 'לא מתחשק לי לעבוד', כלומר- 'הנטיה שלי כלפי האפשרות לעבוד היא שלילית'). בנוסף לממצאי השאלונים, אני מציעה במחקר זה הגדרה מתוקנת של קבוצת הפעלים שמשותפים באלטרנציה ה- DDC: אני מראה שהתהליך הגזירתי אשר יוצר את המבנה רגיש למידע התמטי של פועל הקלט (כלומר- 'rabotat' לעבוד' בדוגמאות שלמעלה). כמו כן, אני מראה באמצעות מבדקים שפועל הקלט והתפקיד התמטי שלו אינם נגישים במבנה התחבירי של ה- DDC, מה שמצביע על כך שהם עוברים מניפולציה במהלך תהליך הגזירה. בהסתמך על הבסיס האמפירי היציב יותר אשר נבנה בחלק הראשון של המחקר, אני מציעה ניתוח תאורטי של ה- DDC הרוסי. אני טוענת שהמבנה נגזר על ידי אופרציה לקסיקלית שיוצרת ערך פעלי חדש על ידי כך שהיא משנה את פועל הקלט ואת התפקיד התמטי שלו. לניתוח המוצע מספר השלכות תאורטיות, החשובה שבהן היא שהוא מספק תמיכה חזקה לעמדה שרואה בלקסיקון מודול אקטיבי של הדקדוק, שבו יכולים להתרחש תהליכים גזירתיים (לדוגמה- Horvath and Siloni 2008, Reinhart and Siloni 2005, Siloni 2002). גישה זו עומדת בניגוד לגישות הרואות בלקסיקון רשימת ערכים בלבד, ומייחסות את כל התהליכים הגזירתיים לתחביר (לדוגמה- Borer 2004, Marantz 1997, Pylkkanen 2008).