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**THE ACQUISITION OF THE DISTINCTION BETWEEN
UNACCUSATIVE AND UNERGATIVE VERBS BY
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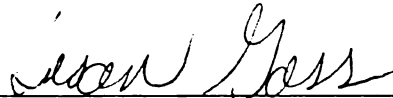
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By

Elena Yuryevna Selezneva

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Linguistics and Germanic, Slavic, Asian and African Languages

2005

ABSTRACT

THE ACQUISITION OF THE DISTINCTION BETWEEN UNACCUSATIVE AND UNERGATIVE VERBS BY ENGLISH SPEAKERS AT THE LOWER INTERMEDIATE LEVEL OF L2 RUSSIAN

By

Elena Yuryevna Selezneva

This study aims to explore the acquisition of split intransitivity in L2 Russian by English learners in relation to the Split Intransitivity Hierarchy (SIH) (Sorace 1996) and the Unaccusative Trap Hypothesis (UTH) (Oshita 2001). The study involved two groups of subjects: one group of L1 English speakers studying Russian for 3- 4 years at MSU and a control group of Russian natives: graduate students at MSU. Subjects were tested on their knowledge of the behavior of the intransitive verbs with respect to Genitive of Negation construction (Brown, 1999). The magnitude estimation technique was used for the elicitation of acceptability judgments. The results show that both groups are subject to SIH in their judgments on unaccusatives; however, their judgments on unergatives do not pattern according to the predictions. The results did not support the SIH and instead supported UTH.

ACNOWLEDGMENTS

I would like to express my sincere gratitude to University Distinguished Professor Susan Mary Gass, my academic adviser, for her encouragement and significant help.

I wish to acknowledge Professor David K. Prestel and Assistant Professor Christina Schmitt, the members of my advisory committee, for their interest in my work and suggestions. I appreciate the time, feedback and support you provided me throughout the process.

I would like to express my deepest appreciation to Dr. Thomas L. Maleck for providing financial support that made it possible for me to live, study and finish this work, as well as for his friendly attitude and guardianship over all these years.

I wish to thank Ellen Maleck, who together with Dr. Thomas L. Maleck, actually made it possible for me to come to MSU to broaden my horizons.

I want to express sincere gratitude to the rector of Volgograd State University of Architecture and Civil Engineering, Vladimir Aleksandrovich Ignatiev, and the Director of International programs of the same university, Vera Vladimirovna Galishnikova, for their support, understanding, and sympathy.

I would like to thank all my friends at MSU: international, American and Russian students for their participation in the research experiments as well as for their friendly support and inspiration.

Last, but not least, I want to thank my family for their understanding and faith.

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INTRODUCTION

The field of language acquisition, in general, and second language acquisition (SLA), in particular, has become one of the most fascinating and exciting fields in language studies in recent years. Though people have always valued the knowledge of foreign languages, until the middle of last century most researches focused on language pedagogy and not language acquisition.

In the 1950s the focus shifted from the improvement of teaching methods to learning, from the teacher and the way he should present the language phenomena to the learner and the way he learns the target language structures (Mitchell & Myles 2004).

Language acquisition can be defined as a process through which the learner creates a mental representation of the language to which he/she is exposed (Culicover & Nowak 2003, 24).

Current theories of language learning and language acquisition are based on research in a wide variety of fields, including psychology, neurolinguistics, sociology, anthropology, and linguistics.

The linguistic approach to language learning has become one of the most influential since Chomsky presented his fundamental theory of the Language Faculty, which can explain simultaneously why human languages have certain properties and why children are so efficient in learning languages.

According to Chomsky's theory words are combined into sentences according to a set of principles, which constitute Universal Grammar (UG), an innate biologically endowed language faculty (Chomsky 1986). UG determines in advance what grammars

can or cannot be. It places requirements on the form of grammars, providing an inventory of possible grammatical categories and features; UG also constrains the functioning of grammar by determining the nature of the computational system. The computational system includes the kind of operation that take place, as well as principles that grammars are subject to.

It is widely accepted that UG constrains native language (L1) acquisition. The evidence that native language acquisition is possible only because children are born with an innately — determined language faculty (UG) is considerable. The evidence that the same innate ability is involved in Second Language Acquisition by older learners is less clear.

In general the term *Second Language Acquisition* (SLA) refers to the process of learning another language after the native language has been learned, both in a classroom situation as well as in more “natural” exposure situation (Gass & Selinger 2001, 5).

Hence, the acquisition of L2 in adulthood is different from the acquisition of L1 both in the context of acquisition and the nature of development. The adult learners already know (at least) one other language: we can assume that the initial state of the child and the adult is not the same. For adults other components of mind have already matured. For children, language acquisition and the development of other cognitive abilities occur simultaneously. Input can be different too, for adults it may involve written language along with spoken language. The final state is also different: many adults display L2 performance that differs from that of a native speaker.

All these differences lead to questioning the role of UG in second language acquisition. Though, as correctly mentioned by Mitchell & Myles (2004), Universal

Grammar is a theory of natural languages, claiming that it plays no part in second language acquisition would be problematic if we take “natural language” as a language spoken by humans.

First and second language acquisition is similar in many ways. Second language learners also go through fairly rigid stages when acquiring certain constructions in the second language. For example, in English, both L1 and L2 learners will acquire morphemes such as, *-ing, plural, irregular past, regular past, -s plural, 's possessive* in relatively the same order.

Mitchell & Myles (2004) point out that the question of whether or not UG is available to the second language learners was crucial fifteen years ago. Now it has been replaced by more focused questions: how UG interacts with other modules involved in language learning and what the role of the first language settings is.

The strongest argument for the accessibility of UG to second language learners is the fact that they do not produce interlanguages that violate UG principals. That is why most of the work is concentrated on the availability of the parameters.

White (2003) points out, that L2 learners develop IL (interlanguage) grammars that are different from the grammars of NSs but are still constrained by UG, and that this is due to the L2 input interaction with UG and the L1 grammar.

According to Hawkins (2001a) and Herschensohn (2000) the evidence of access to UG in L2 acquisition reveals itself as follows:

- Learners can acquire functional categories which do not exist in the L1 (for example English L2 learners acquire clitics in French)
- There are no wild interlanguage grammars

- Learners exhibit knowledge that goes beyond input
- In some cases steady state is native-like.

To demonstrate convincingly that interlanguage grammars are constrained by principles of UG, the phenomenon under investigation must be underdetermined by the L2 input. That is, it must not be something that could be acquired by observation of the L2 input, including statistical inferencing based on frequency of occurrence, on the basis of analogy, or on the basis of instruction; and the phenomenon should work differently in the L1 and L2. That is, it must be underdetermined by the L1 grammar as well. In this way, transfer of surface properties can be ruled out as an explanation of any knowledge that L2 learners attain (White 2003).

The issue of grammatical analysis of IL system has attracted the attention of many researchers. Special attention has been devoted to L2 acquisition of grammatical properties of specific lexico-syntactic classes of verbs - intransitives (Sorace 1993a,b, 1995, 1996, 2000; Sorace & Shomura 2001; Oshita 2000, 2001; Hirakawa 1995, 1999, 2001; Montrul 2004). There are two types of intransitive verbs: unaccusatives and unergatives. They possess distinctive semantic and syntactic properties. A number of studies have found that L2 learners are aware of these distinctions but they have difficulties defining the appropriate syntactic realization of the distinction, and this can lead to non- native grammars even among learners at the advanced level.

The phenomenon of unaccusativity has been extensively investigated in variety of languages. Several hypotheses have been proposed to account for the acquisition of this phenomenon by L2 learners: the Unaccusative Trap Hypothesis (Oshita 2001) and Split Intransitivity Hypothesis (Sorace 1995). Among them there are studies supported either

the former (Oshita 2001) or the latter (Sorace 1993a, b, 1995, 1996, 2000; Sorace & Shomura 2001; Montrul 2004). All the studies were devoted to Western European or Non-European languages and none of the studies examine L2 acquisition of this phenomenon in Slavic languages. The evidence from Slavic languages will give more validity to either of these hypotheses as it is another language group.

The present study attempts to find evidence of these hypotheses in L2 Russian. An interesting question in the context is how L2 learners establish the language specific realization of the distinctions between verb types. The diagnostics for unaccusativity in Russian differs from the diagnostics in English. Hence, the transfer of surface properties is ruled out. English has a subtle evidence for unaccusativity, so the phenomenon can be considered to be underdetermined by the L1 grammar.

The phenomenon under investigation, the unaccusatives — unergatives distinction in L2 Russian can provide good evidence for access to UG as well. It satisfies all the criteria mentioned above to demonstrate that interlanguage grammars are constrained by principals of UG.

The thesis is organized as follows: in Chapter 1, I will introduce the phenomenon of split intransitivity and talk about recent research on the acquisition of this distinction by L2 learners; in Chapter 2, I will touch upon the diagnostics for unaccusativity in Russian and explain in more detail the Genitive of Negation which is my primary interest; in Chapter 3, I will discuss the methodology of the experiment and in Chapter 4, will present its results with some observations. Finally, in Chapter 5, there is a conclusion, which will be focused mostly on the results of the experiment with NNS and NS, and a discussion of the possibilities for future research.

CHAPTER 1

THE PHENOMENON OF UNACCUSATIVITY

In section 1.1 of this chapter I will introduce the phenomenon of split intransitivity: the unaccusatives — unergatives distinction between intransitive verbs. In 1.2 I will discuss recent research on the acquisition of this distinction by L1 and L2 learners. In 1.3 I will explain the two Hypotheses proposed to account for the acquisition of the unaccusative — unergative distinction.

1.1 Split Intransitivity

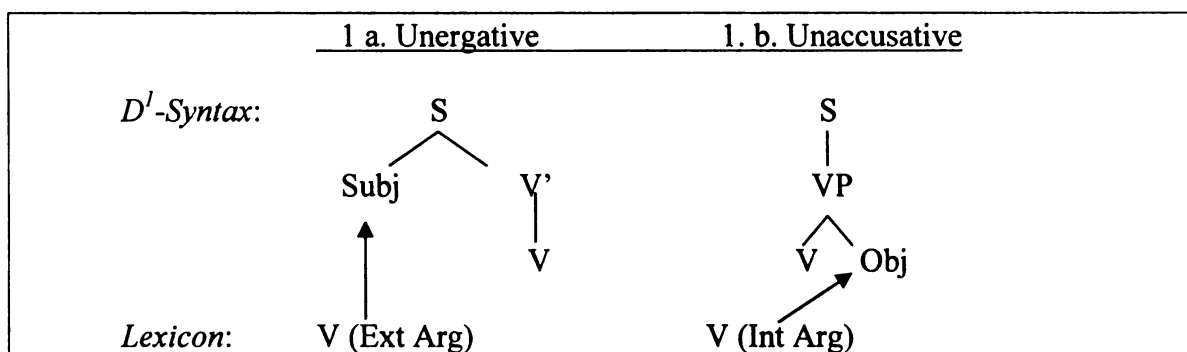
The Unaccusative Hypothesis (UH) was first introduced by Perlmutter (1978). UH stipulates that there are two types of intransitive verbs across languages: unaccusative and unergative, which have distinct syntactic and semantic properties. The original formulation of UH states that the difference between unergatives and unaccusatives is syntactically represented and semantically encoded. Later, two alternative approaches to unaccusativity, syntactic and semantic, were developed in response to UH.

The supporters of the semantic approach consider the difference between the two verb types reducible to the notion of agentivity and telicity (Dowty 1991, Van Valin 1990). Unergative verbs (i.e. *run*, *swim*, *work*) are usually agentive and denote a process

without an end point, while unaccusative verbs (i.e. *die*, *arrive*, *exist*) are nonagentive and telic and denote an action with a particular end point.

The followers of the syntactic approach (Burzio 1986) consider the difference to be solely structural. Unergatives have an external argument, agent in the subject position; Unaccusatives have an internal argument, a theme that moved to the subject position and left a trace. Consider Figure 1:

Figure 1. Deep structure (D-structure¹) of two types of intransitive verbs



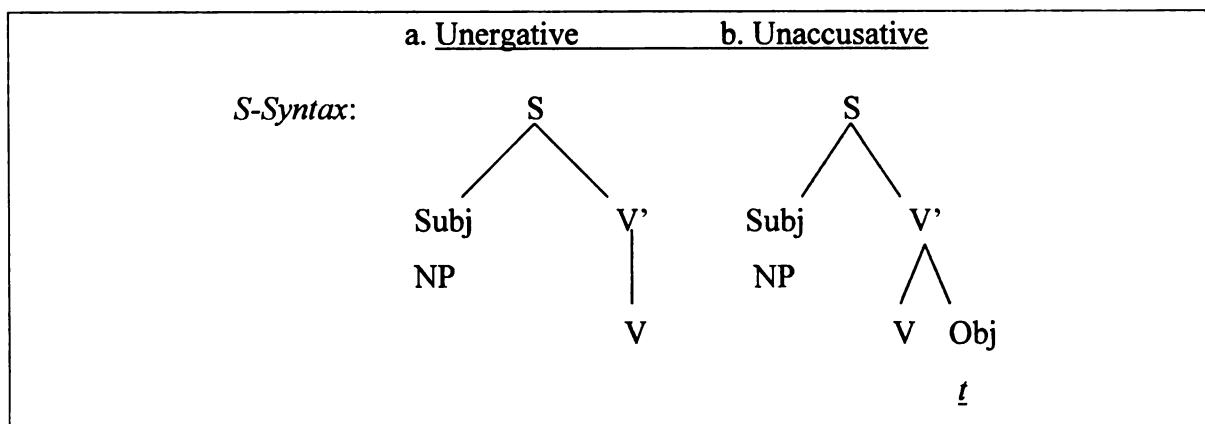
In D- Syntax, the argument of the unergative verb is outside of verbal phrase (VP) (Figure 1a) and the argument of an unaccusative verb (Figure 1b) is inside VP. Thus, the single argument of an unaccusative verb is syntactically equivalent to the direct object of a transitive verb, whereas the single argument of an unergative verb is syntactically equivalent to the subject of a transitive verb.

If we look at the surface structure (S-structure²), they seem to be the same, because the arguments are in the subject position in the sentences. Consider Figure 2:

¹ D-Structure: a level where the underlying or deep structure of the sentence is represented. (White, 2003, 275)

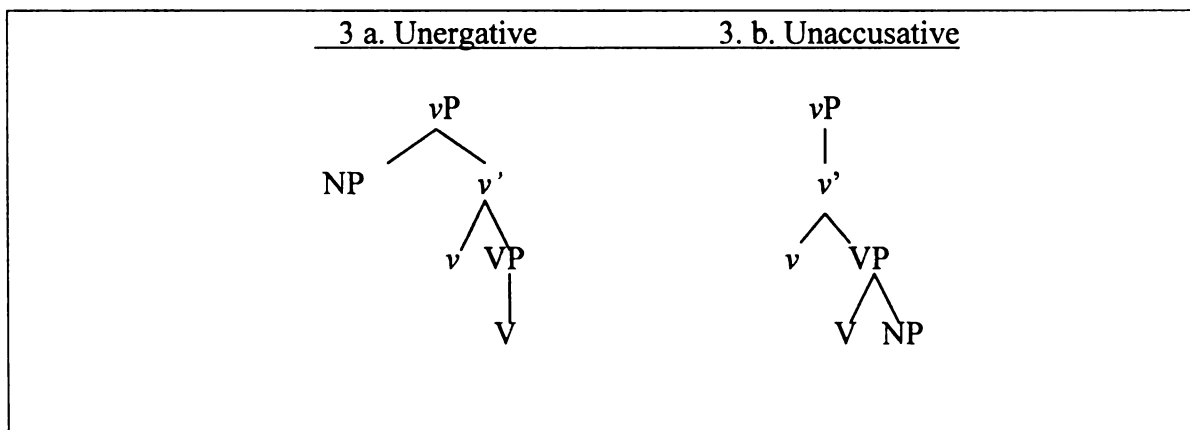
² S-Structure: a level where the surface structure of the sentence is represented. (White, 2003, 228)

Figure 2. S-structure of two types of intransitive verbs



In current Minimalist theories, the single argument of both unaccusatives and unergatives is generated in the VP domain and moves to the functional domain. The distinction between the subject of the unaccusative verb and the subject of the unergative verb is explained through the asymmetry in terms of light – *v*, a semi-functional head (Chomsky 1995). The subject of the unergative verb is introduced by *v*, and the subject of the unaccusative verb belongs to the lexical verb. Consider Figure 3:

Figure 3. Syntactic structure of two types of intransitive verbs



The movement of constituents is performed through the operation *attract*. In this operation, a chain forms between the target of movement and the goal. A trace is an unpronounced copy of the moved element, which is an antecedent of the trace (Chomsky 1995).

Levin & Rappaport (1995) support the original idea of Perlmutter (1978) and bring both approaches together. They argue that unaccusativity is syntactically a unified phenomenon, but emphasize that the distinction between unaccusatives and unergatives is semantically encoded. As an example, they use the case of resultative phrases in English. Consider examples 1a-c:

1. a. The floor had been swept clean of debris. *Passive*
- b. The river froze solid. *Unaccusative*
- c. *The officers laugh helpless *Unergative* (Levin & Rappaport, 1995).

S-Structure subjects of passive (1a) and unaccusative verbs (1b) can predicate resultatives. This situation is impossible with unergative verbs (1c). Levin and Rappaport point out that the explanation for this can be found in the structural difference between the S-structure subjects of these verbs. S-structure subjects of unaccusatives and passives are logical objects. S-structure subjects of unergatives are logical subjects. This would not be possible if the unaccusative — unergative distinction was only a semantic property. At the same time, the projection of arguments is regulated by specific linking rules which are sensitive to semantic notions, such as change of location, and state. Resultative constructions are incompatible with all types of unaccusative verbs. Stative verbs such as *remain* and verbs of inherently directed motion such as *come*, *go*, and *arrive*, are not involved in the resultative construction. Consider examples 2 a-b:

2. a. Carla remained in the country bored.
 b. Willa arrived breathless (L&RH 1995:56).

In (2a), the sentence does not mean that Carla became bored by remaining in the country, and (2b) it does not mean that Willa became breathless as a result of arriving. These facts illustrate that the syntactic structure of unaccusatives is not the only factor effecting their performance with respect to different syntactic tests for unaccusativity; semantic characteristics must also influence their behavior.

The difference between these two classes of verbs is considered universal. Two distinct types of intransitive verbs can be found in all languages with some language specific syntactic and morphological features. For example, in English, unaccusative verbs can appear both with existential subjects and in resultative constructions, whereas unergatives cannot (Perlmutter 1978). In Italian and Dutch unaccusative verbs can appear with the perfective auxiliary *essere, zijn* (be) whereas unergative and transitive verbs take the auxiliary *avere, hebbe* (have) (Burzio 1986, Sorace 1993a, b). In Spanish transitive and unaccusative verbs allow bare plurals in postverbal position and absolutive constructions³ while unergative verbs do not behave in this way (Montrul 2004). In Japanese, the adverb *takusan* (a lot) has two distinct interpretations. With unaccusative verbs it quantifies the argument of the verb, and with the unergatives, it quantifies the activity described by the verb and not the argument (Hirakawa 2001).

From the literature review that follows it is evident that unaccusative verbs pose a learning problem, as are identical to unergative verbs in their surface syntactic

³ Clauses with a past participle that modify a postposed noun phrase and agree with it in number and gender. (Montrul, 2004)

structure. The question that arises is how language learners acquire the distinction of these two very similar types of verbs.

A substantial body of research in SLA is devoted to the acquisition of this distinction. For most linguists, the acquisition of unaccusativity represents a “poverty of stimulus” problem. It is not clear how learners identify verbs belonging to different types of intransitives. Both of them have one argument but they do not behave identically in regards to different syntactic constructions. This distinction poses even more serious problems for L2 learners. According to Juffs (1998), this type of verbs is underrepresented in second language teaching materials and, as a result, the distinction is not taught in the language classroom.

In general, very few errors have been reported in L1 acquisition of this distinction. Children begin to distinguish these two types of verbs very early (Babyonyshev, et al, 2001; Borer and Kenneth Wexler 1992; Von Hout 1996). In contrast to L1 acquisition, a lot of mistakes have been found in L2 acquisition even among advanced learners. The difficulties with unaccusatives were found in L2 English (Oshita, 2001, Hirakawa, 1995, Zobl, 1989) as well as in other than English L2s: Italian and French (Sorace, 1993), Japanese (Hirakawa, 1999), I will discuss the research in more details in 1.2.

Two hypotheses were proposed to account for these difficulties. Oshita (2001) proposes the Unaccusative Trap Hypothesis. He argues that at the first stage of acquisition, learners employ one single argument linking rule for both types of intransitive verbs. The rule is not sensitive to any semantic notion. Later, learners begin

to distinguish unaccusatives and unergatives and reconstruct interlanguage grammar. At this stage of acquisition they become sensitive to semantic notion as well.

Sorace (1995) proposes the Split Intransitivity Hypothesis. It states that unaccusative and unergative verbs display various behaviors across and within languages. This behavior depends on their position in the hierarchy, which distinguish core unaccusative and unergative verbs from peripheral verbs. The hierarchy identifies the notion of telicity a core notion for unaccusatives and agentivity for unergatives. Peripheral verbs can vary in their behavior across languages. I will talk in more detail about these two hypotheses in 1.3.

Having briefly introduced the phenomenon, I move to a discussion of the previously conducted research on the acquisition of the unaccusative - unergative distinction in L2 and the hypotheses proposed to account for the acquisition of this distinction.

1.2 Research on the acquisition of unaccusatives and unergatives

Much research has been done in the past few years on the acquisition of the unaccusative — unergative distinction by L2 learners. Most research has been devoted to L2 English or other European languages. However, a number of studies were done on non-Indo-European languages (Sorace & Shomura 2001, Hirakawa 1999, 2001). The existence of this phenomenon in non - European languages confirms the universality and the validity of UH for different language types.

A great deal of research is devoted to the analysis of incorrect morphology. Recent findings show that L2 learners are aware of the argument structure distinction between unaccusative and unergative verbs, though the syntactic tests for unaccusativity vary from language to language.

The research on the acquisition of the unaccusative — unergative distinction began with English, arguably, the most well described language in the field of linguistics. Zobl (1989) was one of the first scholars who described these types of mistakes in an L2 and attracted attention to the problem.

English does not have the difference in the auxiliary selection as a diagnostic of unaccusative and unergative, unlike Italian and Dutch (See Sorace 1993a, b and Burzio 1986). Nevertheless, L2 English learners regardless of L1 treat it as if observing this distinction. The unaccusative verbs sometimes appear with auxiliary *be* and a past participle in interlanguage English. This is a common L2 production error in speech and writing, as well as an error in grammaticality judgment tasks. Consider examples in 3:

3.
 - a. *An accident *was happened*. Montrul (2004, 242)
 - b. *Most of people *are fallen* in love and marry with somebody (Zobl 1989, 204).
 - c. *My mother *was died* when I was just a baby (Zobl 1989, 204).

In (3), learners (3a L1 - Spanish, 3 b,c - Chinese) moved the Theme argument into the subject position, but ungrammatically have added passive morphology. Zobl (1989) proposes an explanation for this type of error with unaccusative verbs by pointing out the similarities between unaccusatives and passives. Both of them have an internal argument (logical object or theme) but no external argument (logical subject or agent). In addition, the internal argument moves to the subject position. Zobl assumes, following Burzio

(1981) that across languages unaccusatives have the argument structure, shown in (4). ESL learners adopt it as the null hypothesis.

4. [VP [V open NP the door]]

Learners of English note the parallel with the passive. The theme originates as an internal argument of the verb and raises to a subject position for reasons of case. They take the passive morphology as the means to indicate the NP raising. Once they acquire the passive, unaccusatives are subject to this syntactic rule of *NP* movement because the passive in English indicates a connection between the internal argument and the subject position.

Zobl concludes that the syntactic rule never fully replaces the lexical rule, which explains why learners produce both native-like and ungrammatical unaccusatives in English.

Production and acceptance of causative errors with unaccusative and unergative verbs is another common error for L2 English learners. Consider examples in 5:

5. a. *The man *disappeared* the ball (Montrul 2004, 242).
b. *I was just patient until *dried* my clothes (Zobl 1989, 204).
c. *Sometimes *comes* a good regular wave (Zobl 1989, 204).

Speakers fail to move the Theme argument in (5) to the specifier of IP in order to get Nom Case.

Montrul (2004) mentions another very common mistake in L2 English: incorrect rejection of unaccusative verbs in grammatical noun phrases - verb sentences (NP-V) in judgment tasks. However, she also notes the correct use of this sentence pattern in all other cases (6):

6. *John left*

Oshita (2000) presented data from the database of Written English, which he searched for ten unaccusatives and ten unergative verbs. Out of 941 token of unaccusatives, there were 38 sentences involving passivized unaccusatives. Such errors totaled only 4% of all errors with unaccusatives. Out of 640 token of unergative verbs, there was only one error of this type, which total 0.15%. Errors of this kind practically do not exist. The findings show that unergatives and unaccusatives are represented as two distinct classes in interlanguage grammars; otherwise the same type of errors would appear with both types of verbs. Therefore, learners are aware that an unaccusative verb poses only the internal theme – argument (White 2003).

White (2003), discussing Oshita's findings, concludes that L2 learners correctly represent the argument structure of unaccusative verbs as having an internal theme argument. Learners map this argument to the correct position within VP. Usually, L2 learners experience problems relating argument movement in the syntax, to the morphology associated with NP movement.

However, it is not clear how learners distinguish which particular verb belongs to which class. Moreover, the reason for the classification is unclear, because they receive only positive evidence. To account for the difficulties of acquisition of the distinction two different hypotheses were proposed. Now, I will move to their discussion.

1.3 The Unaccusative Trap Hypothesis (Oshita 2001) and Split Intransitivity Hypothesis (Sorace 1995)

A number of studies have shown that unaccusatives cause problems for L2 learners of English with various L1 backgrounds even at high intermediate and advanced levels of interlanguage development (Oshita 2000, Hirakawa 1995).

Several hypotheses were proposed to account for the difficulty of unaccusative – unergative acquisition. Two of these hypotheses are relevant to the present study: the Unaccusative Trap Hypothesis (Oshita 2001) and the Split Intransitivity Hypothesis –SIH- (Sorace 1995).

Oshita (2001) stipulates that the distinction of two types of intransitive verbs, unergatives (with underlying subjects) and unaccusatives (with underlying objects), may not exist at early stages of L2 acquisition. According to him, both types are syntactically represented as unergatives. This idea is referred to as the Unaccusative Trap Hypothesis (UTH). It offers general predictions about the grammatical development of IL systems. Learners at low and even intermediate levels of proficiency will use one-argument verbs (unaccusatives and unergatives) in the same syntactic environments. If a syntactic error arises, it is more likely to affect unaccusative than unergative. This happens because unaccusative is initially misanalysed as unergative and undergoes reanalysis later. Syntactic errors exclusively observed with unaccusatives should become apparent only after this verb class is correctly distinguished from the unergative class in the IL lexicon. Similarly, the target syntactic structure is possible only with unaccusatives. For example,

the *there*-insertion structure can be fully acquired only after the two classes of intransitives are correctly differentiated in the IL lexicon.

Oshita (2001) proposes a three-stage process for the acquisition of unaccusativity. The first stage is characterized by a *Single-Argument Linking Rule*. This rule causes learners to treat all intransitive verbs as unergatives. Although this does not pose a problem when the verb is indeed unergative, the rule leads to non-native-like forms when the verb is unaccusative. It is strictly a rule that is found only in L2 grammars.

In the second stage, the learner becomes aware of the intransitivity split and produces forms that deviate from those found in the L1 such as the passivization of unaccusatives, reluctance to accept NP-V word order, and the production of V-NP structures.

In the third stage of the process, learners “achieve a native grammar” (Oshita 2001, 289). This stipulation contradicts the evidence shown by other researchers (see Zobl 1989, Hirakawa 1999). One of the characteristic properties of the acquisition of unaccusativity in L2 is the persistence of errors, even at very advanced stages of learning. This means that the acquisition of near-native grammars is possible to be achieved. It may require a longer period of time in contact with the target language grammar.

Sorace (1995, 2000) has proposed SIH to account for the systematic differences within the syntactic classes of unaccusative and unergative verbs. The hierarchy distinguishes core unaccusative and unergative verbs from more peripheral verbs. The proposed hierarchy places crosslinguistically unaccusative verbs on one end, and invariably unergative verbs on the other. Languages differ in the point along the hierarchy that separates unaccusatives from unergatives, and these two categories of

intransitive verbs are distinguished in each language by differences in syntactic behavior. Sorace and Shomura (2001) argue that the difficulty in acquiring the split between unaccusatives and unergatives is caused by the problem of systematical linking “a multicategorical lexical-semantic level to a necessarily binary syntactic level...” (Sorace & Shomura 2001, 249). This hierarchy, which is based on aspectual parameters, identifies the notion of “telic dynamic change” (Sorace & Shomura 2001, 249) at the core of unaccusativity, and “agentive nonmotional activity” (Sorace & Shomura 2001, 249) at the core of unergativity. The extremes of the hierarchy thus, consist of maximally distinct core verbs —verbs of change of location (i.e., *arrive*) and verbs of agentive nonmotional activity (i.e., *work*) — which consistently display unaccusative or unergative characteristics, respectively. In contrast, peripheral verb types between the extremes are prone to variable syntactic behavior. The overall hierarchy of split intransitivity is represented in Figure 4 (Sorace,1995):

Figure 4.

Split Intransitivity Hierarchy	
	Unaccusative (least variation)
1. Change of Location	↑ ↓
2. Change of Condition	
3. Appearance	
4. Continuation of preexisting condition	
5. Existence	
6. Uncontrolled process	
a. emission	
b. involuntary reaction	
7. Controlled motional process	
8. Controlled nonmotional process	
	Unergative (least variation)

Peripheral verb types include (arranged in order of closeness to the core): (1) verbs denoting indefinite change in a particular direction (i.e., *rise*), (2) change of condition (i.e., *wilt*), (3) appearance (i.e., *appear*), (4) continuation of a preexisting condition (i.e., *stay*), and (5) states (i.e., *exist*, *suffice*). Peripheral verbs which are closer to the unergative core include verbs denoting (7) motional processes (i.e., *swim*), and various kinds of uncontrolled processes (such as (6) body functions [i.e., *sweat*]), (6a) involuntary reaction (i.e., *tremble*), and (6b) emission (i.e., *rattle*). The hierarchy does not include dyadic verbs alternating with transitive variants (i.e., *break*, *increase*), which are weakly unaccusative and display unergative behavior in some languages (see Sorace 2000).

The problem with hierarchies of this sort, as Montrul (2004, 243) notes, is that it is difficult to find counter examples and to make sharp and clear distinctions among categories of grammatical elements. She stipulates that peripheral verbs may be subject to event-type shifts though sometimes they can be either telic or atelic, as in 7:

7. a. I ran for an hour.
 b. I ran to the store.

Montrul (2004, 243) points out that they can receive multiple argument realization depending on other elements in the sentence like arguments, adverbials, clitics, or prepositional phrases. In turn, this grammatical variability is reflected in how individual speakers may conceptualize these verbs. By contrast, core verbs are not open to such variation, and this is the strongest part of the prediction. Montrul (2004) interprets the hypothesis as if there should be observed a trace with core unaccusatives and no trace with core unergatives. However, with the more peripheral verbs individual speakers'

production and acceptance may vary greatly. Learners' judgments will be less sure with peripheral verbs than with core verbs (see also Sorace 2000 and Sorace & Shomura 2001).

Montrul (2004) presents data that provide the psycholinguistic evidence supporting SIH proposed by Sorace (2000). She examined 35 native Spanish speakers and 44 English speaking learners of Spanish in regards to on-line processing and the acquisition of unaccusative–unergative distinction. The results of the use of off-line measures such as absolute–scale grammaticality judgment task suggest that native and non-native speakers have more determinate judgments with core verbs and display inconsistent judgments with less core and peripheral verbs.

To summarize, the unaccusative–unergative distinction is cross-linguistic and can be found in all languages with languages implementing different syntactic and morphological behavior to show the difference. There is a discussion whether the distinction should be purely syntactic (Burzio 1986), purely semantic (Dowty 1991, Van Valin 1990) or if it should be syntactic and semantic simultaneously (Sorace 2000 and Levin & Rappaport 1995).

The L1 and L2 learners can learn the difference between these two types of intransitive verbs from the linguistic data. The question arises from how learners discover this difference if given only positive evidence, i. e., which particular verb belongs to which class, and the reason for the classification. The unaccusative–unergative distinction is not taught in the classroom and it is not clear how L2 learners distinguish these types of verbs. The evidence from the L1 cannot always help as the diagnostic since the unaccusative–unergative distinction varies from language to language. Two hypotheses

were proposed to account for the fact that L2 learners distinguish unaccusative vs unergative verbs UTH (Oshita 2001) and SIH (Sorace 1995).

UTH stipulates that both types of verbs are syntactically represented as unergatives. The acquisition of the distinction occurs in three stages. In the first stage, *Single-Argument Linking Rule* causes learners to treat all intransitive verbs as unergatives. In the second stage, the learner is aware of the intransitivity split. In the third stage of the process, learners “achieve a native grammar” (Oshita 2001, 289). What contradicts the evidence from other researchers as one of the characteristic properties of the acquisition of unaccusativity in L2 is the persistence of errors, even among advanced learners.

SIH distinguishes core unaccusative and unergative verbs from peripheral verbs. These two categories of intransitive verbs are distinguished in each language by differences in syntactic behavior. This hierarchy, which is based on aspectual parameters, identifies the notion of “telic dynamic change” at the core of unaccusativity and that of “agentive nonmotional activity” at the core of unergativity.

The present study aims to investigate if there is evidence that supports either of these hypotheses in Russian. UTH states that both types of intransitive verbs are represented as unergatives in IL grammars on the early stage. To support the hypothesis we need to show that L2 learners use both types of verbs in the same syntactic environment. The syntactic structures, possible only with unaccusatives, are acquired only if two classes of verbs are correctly distinguished. The present study will address all these issues.

In order to investigate if L2 learners follow the hierarchy proposed by Sorace, core and peripheral unaccusative and unergative verbs will be used for the experiment. If L2 learners follow the proposed hierarchy, they will be more confident in their judgments with core unaccusative and unergative verbs and less sure with peripheral. They will consider ungrammatical examples less ungrammatical with peripheral verbs and grammatical example less grammatical.

The purpose of this study is to investigate acquisition of the unaccusative- unergative distinction by native speakers of English in L2 Russian. English is not the easiest language in which to study these matters, since evidence for unaccusativity in English is subtle. Russian, on the other hand, provides a strong test for unaccusativity with the genitive-of-negation (GN) construction.

In the next chapter, I will talk about the syntactical peculiarities of GN constructions and other diagnostics for unaccusativity.

CHAPTER 2

PHENOMENON OF UNACCUSATIVITY IN RUSSIAN

In this chapter I will talk about the unaccusative–unergative distinction in Russian. There are four traditional diagnostics for unaccusativity in Russian: 1) *po*-phrases, 2) *na*- phrases, 3) Locative Inversion, 4) Genitive of Negation (GN). In what follows I will present information on all four (2.1) although, only the fourth one (GN) will be used in the study and presented in more details in 2.2. The chapter will also include partial conclusions.

2.1 Diagnostics for Unaccusativity in Russian

Several syntactic and morphological diagnostics for unaccusativity have been proposed for Russian. However, these diagnostics are quite distinct from those proposed for other European and Non-European languages. If you recall from the previous chapter, different languages have different syntactic and morphological features. For example, in English, unaccusative verbs can appear both with existential subjects and in the resultative constructions whereas unergatives cannot (Perlmutter 1978). In Italian and Dutch unaccusative verbs can appear with the perfective auxiliary *essere, zijn* (be) whereas unergative and transitive verbs take the auxiliary *avere, hebbe* (have) (Burzio 1986, Sorace 1993a, b). In Spanish transitive and unaccusative verbs allow bare plurals in postverbal position and absolutive constructions while unergative verbs do not behave in this way (Montrul 2004). In Japanese, the adverb *takusan* (a lot) has two distinct

interpretations. With unaccusative verbs it quantifies the argument of the verb, and with the unergatives, it quantifies the activity described by the verb and not the argument (Hirakawa 2001).

We can not use auxiliary selection as a diagnostic for unaccusativity in Russian since there are no auxiliaries in the past tense. The past participle agreement will not provide relevant information either since all verbs in the past tense agree with their subjects, regardless of their argument structure. Consider examples in 8:

8. a. *Unaccusative*
 Otvet prishel
 answer-Masc Sg arrived-Masc Sg
 'The answer came.'

- b. *Unergative*
 Anna zvonila.
 Anna-Fem Sg called-Fem Sg
 'Anna called.'

There are four traditional diagnostics for unaccusativity in Russian: 1) *po*-phrases, 2) *na*- phrases, 3) Locative Inversion, 4) Genitive of Negation (GN).

Babby (1980), Schoorlemmer (1995) and Pesetsky (1982) proposed distributive *po*-phrases in Russian as a diagnostics of unaccusativity. Pesetsky argues that distributive *po*-phrases are limited to direct objects and subjects of unaccusative predicates, as shown in (9):

9. a. *Transitive*
 Ja dal mal'chikam po jabloku.
 I gave boys-Dat (po) apple-Dat
 'I gave the boys an apple each' (Pesetsky 1982, 69).
- b. *Unaccusative*
 Po jabloku upalo s kazhdogo dereva.
 apple-Dat fell from each tree-Gen
 'A (different) apple fell from each tree' (Babby 1980, 45).

- c. *Unergative*
 *V kazhdoy kvartire smeyalos' po-mal'chiku
 in each apartment laughed (po) boy-Dat
 'A (different) boy laughed in each apartment' (Schoorlemmer 1995, 33).

Po assigns Dat. Case when it appears with the subjects of a transitive verb, as shown in (9a) above. When subjects of unaccusative predicates appear in *po*-phrases, as in (9b), the verb displays a lack of subject-verb agreement, which is marked by the impersonal morphology *-o* ending in the past tense. *Po* phrases are ungrammatical with unergative verbs.

A second diagnostics discussed by Borik (1995) and Schoorlemmer (1995) analyses the behavior of verbs with the prefixes *na-* (V a lot) and *pere-/po-* (V all). Unlike standard verbal prefixes in Russian, these prefixes are quantifiable and affect the interpretation of the internal argument of the verbs. Borik and Schoorlemmer show that a quantification of this type applies only to internal arguments: NPs in the direct object position with transitive verbs and subject position of unaccusative verbs as in (10):

10. a. *Transitive* (Borik 1995, 32-33)
 Deti **na**kupili (mnogo) knig.
 children-Nom bought a-lot books-Gen
 'The children bought a lot of books.'
- b. *Unaccusative*
 Mnogo travy **na**roslo v parke.
 a-lot grass-Gen grew in park
 'A lot of grass grew in the park.'
- c. *Unergative*
 *Mnogo detej **na**igralo v parke.
 many children-Gen played in park
 'Many children played in the park.'

A third diagnostics is *Locative Inversion*. This diagnostics has been discussed by Babyonyshev (1996). Babyonyshev argues that Locative Inversion is only possible with unaccusative predicates, as shown below in 11-12 (examples from Babyonyshev 1996):

11. *Unaccusatives*
 - a. V uglu valjalas' kurtka.
in corner lay jacket-Nom
'In the corner lay a jacket.'
 - b. V sadu rosli tri rozy.
in garden grew three roses-Nom
'In the garden grew three roses.'
12. *Unergatives*
 - a. *Sebe pod nos napeval Petja.
self under nose sang Petja-Nom
'To himself sang Petya.'
 - b. *V kvartire svistit Vanja.
in apartment whistles Vanya-Nom
'Vanya is whistling in the apartment.'

Babyonyshev (1996) notes that Russian only allows inversion with unaccusative predicates to maintain a neutral interpretation in the discourse, despite relatively free word order.

The evidence for unaccusativity in Russian is extensive and diverse. However, there are several reasons to eliminate mentioned above diagnostics from the current experiment. First, the structures discussed above are difficult to acquire as evidenced by continued errors even in advanced stages of learning. Another reason for not including these structures for the present study is that they are less frequent in speech and thus, it will provide less evidence for L2 learners.

The fourth diagnostic for unaccusativity is the Genitive of negation (GN) and this is my primary interest. In contrast to the *po-* and *na-* construction, it is widely used in

every day language and can give positive evidence for its identification and acquisition by a language learner.

Pesetsky (1982) was the first to argue that the GN construction could be used productively as a diagnostic for unaccusativity in Russian. Like direct objects, subjects of unaccusative verbs can receive Genitive Case under negation. Brown (1999) and Bailyn (1997) discussed the fact that GN is only licensed on NPs within the scope of sentential negation and generally receives an existential interpretation.

2.2 Genitive of Negation

A significant topic in Russian syntax which got a lot of attention in recent years is the problem of genitive of negation. Genitive of negation (GN) in Russian is a phenomenon in which an argument that bears structural Case in an affirmative sentence can surface bearing Genitive Case (Gen) in the corresponding negative sentence. Consider examples in 13:

- | | | |
|-----|--|--|
| 13. | Otvét / *Otvéta
Answer _{Nom/Gen}
<i>The answer came.</i> | prishel/ *prishlo
came _{Mask/ Neut Sg} |
| | Otvét-a/ Otvét
Answer _{Gen /Nom}
<i>The answer didn't come.</i> | ne prishlo/ prishel
neg came _{Neut/ Mask Sg} |

The phenomenon has received considerable attention in the literature both in linguistics and language acquisition (see Brown 1999, Bailyn 1997, Pesetsky 1982, Babyonyshev et al 2001).

Brown (1999) points out that Gen can only occur on a non-oblique VP-internal argument of a negated verb: subjects of unaccusative verbs and objects of transitive verbs (see 14 a-b). However, it is disallowed on the subject of both transitive and intransitive verbs and direct objects of verbs when assigning some oblique case (Dat, Instr), (see 14 c-d) (all examples are taken from Brown 1999):

14. a. *Internal argument of Transitive*

Ya ne pishu stixov
I neg write poems Gen.
I don't write poems.

b. *Internal argument of Unaccusative*

Otvét-a ne prishlo
AnswerGen neg came Neut Sg
The answer didn't come.

c. *External argument of Transitive*

*Studenta	ne	*pisal	/*pisalo
Student Masc Gen/	neg	wrote Masc Sg	/Neut Sg
Student	ne	pisal	/*pisalo
Student Masc./Nom	neg	wrote Masc. Sg	/Neut Sg

Student didn't write

d. *External argument of Intransitive (unergative)*

Studenty/*Studentov	ne spyat'
Students Masc./Nom/Pl /students Masc./Gen/Pl	neg sleep _{3pPl}

Students don't sleep.

e. *Oblique Direct Object*

Vladimirov ne upravljaet	fabrikoj	/*fabriki
Vladimirov Neg direct	factory Fem Instr/	*factory Fem Gen

Vladimirov doesn't direct the factory.

The GN is accompanied by the impersonal agreement morphology. As illustrated in (14b), when the subject of a negated sentence takes Gen case, the predicate bears the third person singular and neuter agreement morphology.

However, as shown in (15), when the same subject takes Nominative (Nom) case, the agreement is kept intact.

15. Otvét ne prishel
 Answer Nom neg came Mask Sg
 The answer didn't come

As shown in examples (14b) and (15), Gen seems to apply optionally when the sentence has an unaccusative verb. Moreover, Gen can alternate with other cases. Consider table 1 (Brown. 1999):

Table 1. Alternation of Gen with other cases

Verb Type	Gen alternates with
1. transitive	Acc
2. unaccusative	Nom
3. unergative	~

In constructions with transitive verbs, Gen can alternate only with Acc and never with Nom. In constructions with unaccusatives verbs Gen can alternate only with Nom and never with Acc. Gen is never used with unergative verbs.

However, as both Brown (1999) and Bailyn (1997) point out, and the translations to examples in (14b, 15) here repeated as (16a,b) respectively, indicate, the two alternatives in such cases have distinct interpretations. In particular, the GN variants have an existential or indefinite interpretation, whereas the Nominative counterparts have a definite interpretation.

16. a. **Otvét-a** ne prishlo
 Answer Masc Gen neg came Neut Sg
 No answer came
- b. **Otvét** ne **prishel**
 Answer Masc Nom neg came Masc Sg
 The answer didn't come

In the existential copula construction in (17), the subject of a negative existential sentence cannot bear Nom-case and Gen case seems to apply obligatorily.

17. a. Na stole est' **zurnaly**.
 on table be magazines Pl. Nom
 'There are magazines on the table'
- b. Na stole net **zurnalov/*zurnaly**.
 on table neg-be magazines Pl Gen/ *Nom
 'There are no magazines on the table' (Bailyn 1997, 86)

The phenomenon under investigation provides good evidence for testing the acquisition of the unaccusative — unergative distinction by L2 learners. Though GN has received considerable attention from syntactic and semantic fields, very few researchers have looked at the acquisition of the distinction by L1 learners (Babyonyshev et al 2001), in the manner presented in 2.3 and no research has been devoted to the L2 acquisition of it. Thus, the present study initiates the promising investigation in the second language acquisition of the unaccusative — unergative distinction.

2.3. Research on L1 acquisition of GN.

Recent research has shown that children begin to distinguish the unaccusative — unergative types of verbs very early (Babyonyshev, et al, 2001; Borer and Kenneth Wexler 1992). Von Hout (1996) stipulates that children already have all the necessary knowledge about the syntactic distinction but they need to learn the semantic classification by distributional evidence. Babyonyshev, et al, (2001), Borer and Kenneth Wexler (1992) point out that certain syntactic structures are still not acquired and this fact poses a problem for the production of adult - like structures with unaccusative verbs.

Babyonyshev, et al (2001) investigate the acquisition of the split intransitivity phenomenon in L1 Russian by children ranging in age from 3 to 6. The results show that they master GN with the direct object of transitive verbs earlier than they master it with intransitive verbs. By the age of three they are able to distinguish these two types of verbs.

The present study tests the hypothesis of Borer and Wexler (1992), which stipulates that young children lack the ability to represent A-chains (argument chain) that link thematic subjects and object positions. According to Baker (1988), semantic role labels are associated with syntactic positions. The idea is referred to as a Uniformity of Theta –role assignment Hypothesis (UTAH). Consider example 18:

- 18. a. Was opened the door.
- b. The door_i was opened (Babyonyshev, et al 2001, 8)

Children consider 18b ungrammatical, though the structure is grammatical in adult language. Children seem to be unable to assign any Θ -role to “door” which is in the subject position and its Θ -role belongs to the object position.

Results of an experiment by Babyonyshev, et al (2001) have shown that Russian children at age three understand the use of GN. They can use the subtle semantic distinction, such as wide vs. narrow scope of negation, or nonspecific vs a specific object (Babyonyshev, et al 2001, 25). The results of the children’s performance with unaccusative verbs are the most interesting for us. Statistical analysis reveals the differences in the response to two types of unaccusative verbs. The mean number of GN responses for regular unaccusatives is 45% and 47% with bleached⁴ unaccusatives. The

⁴ Bleached unaccusative: unaccusatives (including existential be) that require Gen case on their argument regardless of the specificity of it (Babyonyshev, et al, 2001 2001,13)

significance of the difference between means reveals that the children treat unaccusative verbs as unergatives. There is an age difference in the responses. The means for in the group of children older than 4 is higher than those of 4 and younger. .50 vs .40 the difference is 10%. For bleached unaccusatives the difference is even higher, 31% and highly significant $t(28) = 3.21, p < .001$. Children's performance on the unaccusatives improves with age.

The study agrees with the results of other studies in L1 acquisition of this phenomenon. Most of them indicate that children acquire the syntactic distinction between unaccusative and unergative verbs before age 4 (Snyder, Hyams & Crisma 1995; von Hout 1996). In the next chapter I will talk about research questions, design and methodology of the study.

CHAPTER 3

METHODOLOGY OF THE EXPERIMENT

In this chapter, I will discuss the research questions and hypotheses as well as the methodology and procedure used in the research.

3.1. Research questions and Hypotheses

Several research questions were proposed for the present study.

1. Do L2 learners of Russian differentiate the unaccusative and unergative verbs by allowing GN on unaccusatives and disallowing it on unergatives?
2. Do L2 learners of Russian differentiate the unaccusatives and unergatives depending on the position of monadic verbs on Sorace's SIH?
3. Do L2 learners distinguish better the unergative syntactic behavior of the verbs denoting motional processes and worse the behavior of the verbs denoting non-motional processes?
4. Do L2 learners distinguish better the unaccusative syntactic behavior of the verbs denoting change of location and worse the behavior of the stative verbs?
5. Do L2 learners show a stronger preference for grammatical sentences over ungrammatical sentences with core unergative and unaccusative verbs, and a weaker preference with peripheral verbs if they recognize the difference at all?
6. Do grammaticality judgments of L2 learners differ from those of L1 speakers?

7. Do L2 learners analyze unaccusative verbs as unergatives, following Single Argument Linking Rule, as predicted by Oshita's UTH?
8. Have L2 learners achieved near-native proficiency in distinguishing unaccusatives and unergatives?
9. Will L2 learners allow the Genitive Case in all the structures since it is optional?

Several specific predictions were made regarding the use of the genitive of negation by L2 learners in accordance with the general predictions made by UTH and SIH hypotheses.

1. Learners will differentiate the unaccusative and unergative verbs by allowing GN on unaccusative and disallowing it on unergatives.
2. Learners will differentiate the unaccusatives and unergatives depending on the position of monadic verbs on Sorace's SIH.
3. Learners will distinguish better the unergative syntactic behavior of the verbs denoting motional processes and worse the behavior of the verbs denoting non-motional processes.
4. Learners will distinguish better the unaccusative syntactic behavior of the verbs denoting change of location and worse the behavior of the stative verbs.
5. Learners will show a stronger preference for grammatical sentences over ungrammatical sentences with core unergative and unaccusative verbs, and a weaker preference with peripheral verbs if they recognize the difference at all.
6. The grammaticality judgments of L2 learners will differ from those of L1 speakers.

7. L2 learners will analyze unaccusative verbs as unergatives, following the Single Argument Linking Rule, as predicted by Oshita's UTH.
8. L2 learners have not achieved near-native proficiency in distinguishing unaccusatives and unergatives.
9. Learners will not allow the Genitive Case in all the structures since it is optional.

3.2. Method

3.2.1. Participants

The first group of participants consists of college students: 20 native speakers of English ranging in age from 18 to 29 years (mean 23.5); 8 males, 12 females. All of them had learned Russian in a classroom setting for at least 2.5 years but with little exposure to Russian outside the university environment. The second group of participants consists of 6 heritage learners. The data from them will be discussed separately. The third group of participants consists of 11 Russian native speakers, age 23 to 32 (mean 27.5) who are enrolled in various graduate academic programs at MSU. The length of stay in the U.S. ranges from 4 months to 7 years (mean 3.9 years). The subjects have strong connections to their native language and country. They speak Russian every day and visit their native country every year. One of the subjects had spent only four months in the U.S. and still has strong connections with Russia and the Russian language.

3.1.2. Materials

Questionnaire: All subjects were asked to fill out background questionnaires that were slightly different for native speakers of English and Russian (Appendix A, B). The Questionnaire helped to eliminate subjects with L1 other than English and provide some background information about the possible interfering factors such as living abroad for a long time (for both L1 and L2 speakers), and lack of connection with the Russian language and Russia (for L1 speakers).

Vocabulary test: One week before the experiment, all subjects in Group 1 completed a vocabulary test containing 44 lexical items, 22 verbs and 22 nouns (Appendix C), where among the target words there were distractors. Among verbs there were 11 target (unaccusative and unergative verbs) and 11 distractors. All nouns can be considered distractors as the primary goal of this study is unaccusative and unergative verbs.

Subjects were asked to provide not only the translation of the words but to indicate if (a) *they knew the word*, (b) *they had seen the word before but were not entirely sure of its meaning*, (c) *they definitely didn't know the word*. The self report procedure is taken from Smith (2004). The test determined their familiarity with the lexical items in the task and helped to eliminate the possible lexical difficulties.

Magnitude Estimation (ME): magnitude estimation is a technique that can be used for the elicitation of acceptability judgments. This method was originally developed in psychophysics and recently applied to the measurement of linguistic acceptability. ME was used for the first time on acceptability judgments by Sorace (1992) to compare the

results with those obtained using more familiar techniques. The major reason to employ ME to linguistic data elicitation is that it gives the opportunity to obtain more finely grained data as there is only one restriction on the informant from the nature of the scale itself.

Standard procedures of linguistic acceptability judgments usually form category scales (acceptable, *(unacceptable)) or limited ordinal (acceptable, ?(questionable), *(unacceptable), ** (highly unacceptable)) scales. These scales require absolute rating judgments, rather than relative ranking judgments. Ordinal scales do not provide information about the relative distance between adjacent points on the scale. When ME technique is used for the elicitation of acceptability judgments it provides data with more accuracy.

The procedure is conducted as follows: participants are asked to assign any number to the first sentence and then to assign proportional numbers to successive sentences, so as to reflect the perceived degree of acceptability of each sentence with respect to the first one. For example, if a sentence appears to be 10 times as acceptable as the previous one, it should be assigned a number 10 times as large. Higher numbers correspond to more acceptable sentences.

ME gives subjects the freedom to set up their own range and categories of judgments, thus enabling them to make finer distinctions in their judgments. Also, all judgments are proportional: subjects are asked to state not only if one sentence is better or worse than another, but also how many times better or worse it is. The scale on which judgments are made is open-ended. Subjects can always add a higher score or an additional intermediate rating. The net result is that subjects are able to produce

judgments which distinguish only the differences they observe. The mean responses obtained with the help of ME technique are not merely averages of independent samples but the reflection of robust trends across subjects.

Featherston (2002) and Keller (2003) point out that the results obtained with ME technique exhibit more differentiation than standard judgments are assumed to contain and ME makes it possible to treat linguistic acceptability as a continuum and directly measures acceptability differences between stimuli.

To confirm the experiment one must be sure that the participants understand how to perform magnitude estimations. Many ME experiments use a control condition in which participants are asked to perform magnitude estimations of the length of a line. These have been shown to be proportional to the actual length of the line. Unlike other dimensions, linguistic acceptability has no obvious “physical” scale to locate the informants’ impressions.

Keller (2003) has recently argued that a power law of the same kind as that obtained in psychophysics can be derived by plotting estimated linguistic acceptability against the number of linguistic constraints violated in the stimuli.

3.3. Procedure

One week before the experiment the subjects were asked to complete a vocabulary test.

The following week the participants completed a short practice session (limited to 7-10 min) where they familiarized themselves with the ME process. During the session they were asked to judge line lengths (Appendix D).

The experiment itself consisted of a total of 90 sentences presented in random order: 20 sentences with unaccusatives, 20 with unergatives, 10 with existential verbs and 40 with distractors. The sentences were organized in blocks of 10 to make the judgment task easier for the subjects.

Primary attention was devoted to four types of verbs from Sorace's SIH (see table 1): two unaccusative verbs: verbs of change of location *приходить* (to arrive) and state *существовать* (to exist); two unergative verbs: nonmotional activity *работать* (to work) and motional activity *плавать* (to swim). Subjects were asked to give their grammaticality judgment of the sentences.

Schütze (1996) indicates the possibility of the additional effect of neighboring stimulus sentences on perception of target sentences. The marginal sentences can appear more acceptable when preceded by much worse examples and less acceptable when preceded by much better ones (Schütze 1996, 155). One's "absolute" judgments of a stimulus can be exaggerated by difference between the stimulus and its context. This influence by contrast can occur in the "intuitions" about grammaticality. In order to remove this effect, different orders of sentences were used with both groups. The sentences were the same for all the participants in this experiment.

There was an equal number of grammatical and ungrammatical sentences with target structures and fillers. The block was started randomly with a grammatical or ungrammatical sentence in both task variants. The order of blocks was randomized as well (see Appendix E).

In my experiment subjects were asked to provide purely comparative judgments: these are relative both to a reference item and the participant's own previous judgments. They can fix the value of the reference item themselves relative to which subsequent judgments are made. They can add a higher score if they need to account for better examples or a lower score if they need to account for a less grammatical example. The results of the experiment will be discussed in Chapter 4.

3.4. Analysis

In order to examine the performance of L2 learners regarding GN construction, the present study employs four types of analysis: *descriptive statistics*, *t-test* and *Two-Factor Anova without Replication* and post-hoc (Scheffé test). Only significant differences are reported. $p < .05$ for all tests.

Two-Factor Anova without Replication will be performed on the results of each group, on both unergative and unaccusative verbs. Verb types and NS or NNS groups are variables in the analysis. If ANOVA shows a significant effect or interaction, the null hypothesis is rejected and we need to find where the differences lie, not just that there is a difference. A post-hoc (Scheffé') test will be performed to determine the location of the difference. The Scheffé' test is customarily used with unequal sample sizes, thus it could be used in the analysis of my data. Comparisons are performed both within categories

and across categories for each group. Once again, only significant differences at a minimum significance level of $p .05$ will be reported.

All statistics were performed using SPSS.

In Chapter 4 I will talk about the results of the experiment and the statistic analysis of the data.

CHAPTER 4

THE RESULTS OF THE EXPERIMENT

In this chapter I will present the results of the experiment and the subsequent discussion.

4.1. Results and Discussion

Questionnaire, L2 learners: The data showed that there are no interfering factors to influence the results: none of the L2 learners had stayed abroad more than 5 weeks, two subjects indicated that they speak with Russian natives on a regular basis. They did not specify how regularly, however.

All subjects had been studying Russian not less than 2.5 years (mean 3.2). Eight participants indicated that they speak Russian outside the classroom. Five subjects indicated that they usually speak Russian with their friends; one – with Russians; one – with her Russian boyfriend and one of the subjects indicated *other*.

There is a test to evaluate the level of proficiency of speakers of Russian as a foreign language. None of the subjects took this test. Four subjects misunderstood the question and interpreted it as if they were being asked about a test for their regular Russian course.

All of the subjects had studied another foreign language: 14 of the participants took Spanish, two German and four French.

Questionnaire, NS of Russian: The data of NS of Russian showed that there is a factor that can influence the results of the survey. One of the participants had been in the U.S. more than 7 years. This prolonged stay in the U.S. may influence the grammaticality judgments of this participant. Overall, the length of stay of the participants from the control group varied from 4 months to 7 years (mean 3.9). All subjects, except one that had spent four months in the U.S., mentioned that they visit their home country every year. These periodical visits to Russia extended from two weeks to two months. All subjects indicated that they speak Russian every day with their friends, family, or roommates.

Vocabulary test: The analysis of the data from the test helped to choose the lexical items for the grammaticality judgment task. The selection of the vocabulary was based on the frequency of verbs and nouns in the language and the high percentage (not less than 70%) of correct translations, provided by participants.

The data collected and shown (see next page Table 2), indicates that none of them had problems with the vocabulary used in the grammaticality judgment test. However, half of the participants were not confident about the meaning of the verb *существовать* “exist” and *дракон* “dragon” as they marked the column: “I have seen the word but I am not sure of its meaning”. Nevertheless, they provided the correct translation of the words. The reason for this may be simple guessing, as the phonological form of English word is close to the Russian one. Another reason could be that they came across the word in the text they read and remembered the meaning but they are not sure, as the word is not in their active vocabulary. As the percentage of correct answers is very high, it is likely that they do not experience lexical difficulties regarding these words.

For the reasons mentioned above, only four types of verbs were chosen for the actual test since the rest of verb types were not very well known by L2 learners. As a consequence, unaccusative verbs proposed for the tests were very close to each other in terms of SIH. This may lead to a lack of evidence for SIH support, because learners may uniformly treat these two types of verbs as core unaccusatives.

Table 2 represents the results of the vocabulary test and indicates the percentage of the correct responses that motivated the choice of the vocabulary for the experiment. As it was mentioned above, the selection of the vocabulary was based on the high percentage (not less than 70%) of correct translations, provided by participants.

Even when a correct translation was given, participants were asked if they knew the word or if they had seen the word but were not sure of the meaning. These results are reflected in columns 4 and 5

Table 2. Translate from Russian into English

Translate from Russian into English	Translation	Correct translation	I know the word	I have seen the word but not sure of its meaning	I don't know the word
1. мальчик	(boy)	100%	100%		
2. письмо	(letter)	100%	100%		
3. ответ	(answer)	95%	70%	25%	5%
4. дракон	(dragon)	79%	16%	63%*	
5. окно	(window)	100%	100%		
6. существовать	(to exist)	68%	15 %	53%*	32%
7. шоколад	(chocolate)	100%	100%		
8. студент	(student)	100%	100%		
9. работать	(to work)	100%	100%		
10. врач	(doctor)	100%	84%	16%	
11. прийти	(to arrive)	84%	68%	16%**	16%
12. телеграмма	(telegram)	100%	100%		
13. плыть	(to swim)	95%	69%	26%**	5%

*50% out of 63% wrote correct translation.

** The percentage of correct translation is around 70%.

Results of Grammaticality judgment task:

Descriptive Statistics

The analysis of the data revealed no significant differences among two categories of unaccusative verbs: verbs of change of location and change of state for any group. Similarly, no significant differences were obtained among two categories of unergatives verbs: verbs of nonmotional process and verbs of motional process. Table 3 contains the results of Descriptive statistics.

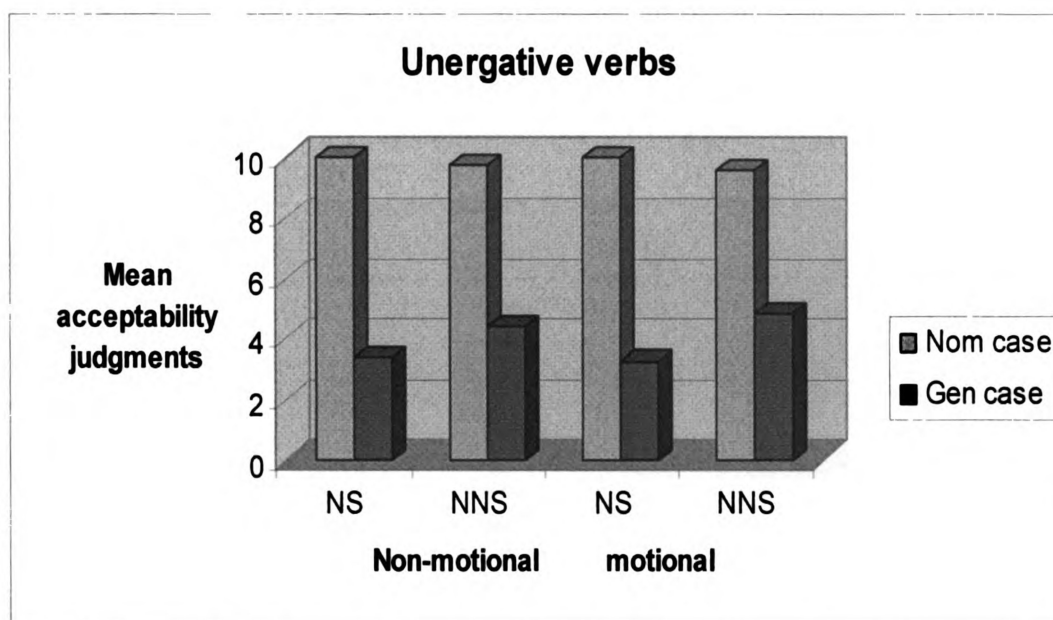
Table 3. Mean acceptability judgment on different verb types.

		NS		NNS	
		Mean	SD	Mean	SD
Nonmotional process <i>work</i>	Nom	10	0	9.73	1.03
	Gen	3.28	3	4.42	4.1
Motional process <i>swim</i>	Nom	10	0	9.56	1.3
	Gen	3,28	3	4.82	4.2
Change of Location <i>arrive</i>	Nom	9.9	1.5	5.74	4.2
	Gen	10	0	6.79	4.21
State <i>exist</i>	Nom	9.6	1.16	7.52	3.67
	Gen	9.18	1.01	7.9	3.71

A graphical representation of the judgments of the two groups on unergative and unaccusatives verbs is shown in Figures 4 and 5.

The GN construction is ungrammatical with unergatives. The graphs indicate that the judgments on the two types of unergative verbs were very close in both groups. The controls (NS group) clearly differentiate between grammatical Nom case and ungrammatical Gen case, accepting the former and rejecting the latter (Figure 4), though we have a rather high mean for acceptability of ungrammatical Gen. The reason for that may be the judgments of grammaticality of one of the participants, who has stayed in the U.S. for 7 years. Overall, his responses differ from the rest of the group by to 3 points. We can stipulate that the length of stay in the foreign country can influence the grammaticality judgments: the ungrammatical sentences are more accepted by him and the grammatical ones are rated less when compared with the results of the other participants.

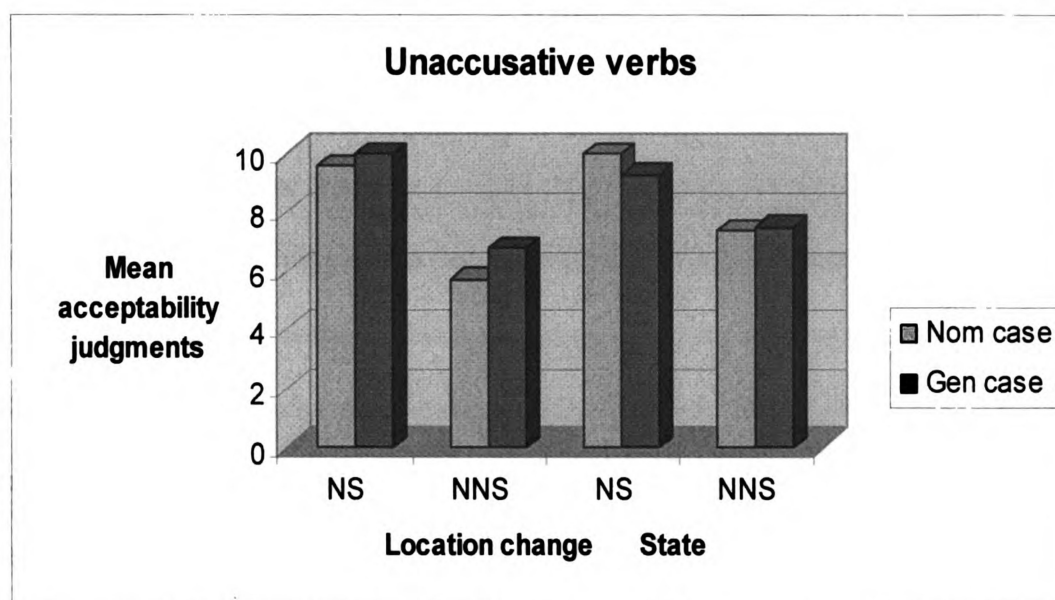
Figure 4. Mean acceptability judgments on unergatives.



The NNS group followed the trend; though they are less sure about the verbs of motional process, the difference is not significant (see Figure 4, above). They tend to accept more ungrammatical sentences.

The graphical representation of the judgments of the groups on unaccusative verbs is shown in figure 5 (next page). It reveals that the group of NS would prefer Nom case to Gen in the constructions with state verbs. This result was not expected. The participants tended to consider Gen “more grammatical” with location verbs and less with state verbs. They indicated this behavior through their personal interaction with the researcher. The opposite can be observed for Nom. However, the difference is not significant. One of the possible explanations is the fact that these verbs are far from each other on SIH and a state verb is associated with a more definite reading than change of location verb (Recall: Gen argument of the verb has indefinite reading and Nom has definite). Figure 5 shows the mean acceptability judgments on unaccusatives verbs.

Figure 5. Mean acceptability judgments on unaccusatives



There is no significant difference in the judgments of the NNS group. They prefer Gen more than Nom.

t-tests

In order to compare the verb types between the groups *t*-tests were performed. The results showed a significant difference on one type of unaccusative verbs: change of location (see Figure 6). $t = 2.495$, $df=28$, $p < .05$. The comparison of the sentences with change of location verbs between the groups produces a significant difference.

There is no significant difference regarding the second type of unaccusatives verbs: verb of state. $t = 1.44$, $df=28$, $p < .05$, *ns*. The fact that NSs prefer Gen over Nom with verbs of change of location, and Nom over Gen with the verbs of state might attribute to the appearance of this significant difference. NNSs showed the same pattern

for both types of unaccusatives. This leaning towards Gen can be explained by means of SIH: the core unaccusative verbs identify the notion of “telic dynamic change” and that attracts Gen. State verbs express this notion less and NSs tend to use Nom.

Two-Factor Anova and Scheffé

One of the focuses of the research was to find out whether native speakers and L2 learners respond differently to different classes of verbs: unaccusative and unergative and different types of verbs depending on their position in the unaccusativity hierarchy proposed by Sorace (2000). It was predicted that L2 learners should be more sure in their judgments with core unaccusative and core unergative verbs and less sure with peripheral verbs as less core verbs are supposed to display variable syntactic behavior within and across languages.

The statistical analysis applied to all the verbs confirmed these trends for the two groups. A repeated measures ANOVA shows that the difference in the verb type is significant $F(3, 28) = 6.157, p < .001$. There are significant differences between groups, $F(3, 28) = 6.295, p < .014$. The interaction between the verb type and the group is also significant, $F(3, 28) = 8.151, p < .000$. To find where the significant difference exists post hoc Scheffé ($p < .05$) was conducted.

Differences in performance on the unaccusative verb type, change of state *exist* versus change of location *arrive*, were not significant $1.76, p < .257$. The differences in performance on unergative type of verbs were not significant as well. Scheffé has not confirmed the results of ANOVA.

ANOVA has shown significant differences between groups, $F(3, 28) = 6.295$, $p < .014$. Scheffé has borne out this result. There is significant difference in judgment between the groups. 1.62 , $p < .047$

ANOVA has identified the significant difference in interaction between the verb type and the group. Scheffé indicated the significant difference between NNS's judgments versus NS's judgments regarding change of location verb: 5.23 , $p < .029$

Thus, ANOVA and Scheffé confirm that two groups are different in their judgments and the difference is located in the judgments of core unaccusative verbs. This result validates the hierarchy proposed by Sorace (1995) for intransitive verbs. The judgments regarding unergative verbs were not significantly different. The finding can be explained by the fact, that Gen is ungrammatical with this type of verb. L2 learners distinguish the two types of verbs in Russian.

4.2 Research questions and answers

- 1. Do L2 learners of Russian differentiate the unaccusative and unergative verbs by allowing GN on unaccusatives and disallowing it on unergatives?*

The original prediction was that learners would differentiate the unaccusative and unergative verbs by allowing GN on unaccusative and disallowing it on unergatives.

The experiment has shown that the learners do allow Gen case on the arguments of unaccusative verbs but at the same time they allow it on the arguments of unergative verbs. Several reasons may account for this result: the optionality of case assignment and, as a result, the lack of unambiguous evidence for the distinction of

unaccusatives and unergatives in L2; the subtle evidence for unaccusativity in English. The prediction is not confirmed.

The data suggest that the learners are in the process of forming a TL grammar; otherwise they would not allow Gen case on the arguments of unergative verbs. Gen is ungrammatical with unergatives. If the participants were not in the process of forming a TL grammar the data collected would be comparable to that of NSs.

2. Do L2 learners of Russian differentiate the unaccusatives and unergatives depending on the position of monadic verbs on Sorace's SIH?

The results of a repeated measures ANOVA shows that the difference in the verb type is significant $F(3, 28) = 6.157, p < .001$. However, Scheffé test did not reveal significant difference between the grammaticality judgments of unaccusative and unergative verbs depending on their position on Sorace's SIH.

We can not make a generalization about the general behavior of L2 Russian in regards to SIH due to the small sample size of the participants and the impossibility to include all the verb types in the study.

3. Do L2 learners distinguish better the unergative syntactic behavior of the verbs denoting motional processes and worse the behavior of the verbs denoting non-motional processes?

The original prediction was that learners will distinguish better the unergative syntactic behavior of the verbs denoting motional processes and worse the behavior of the verbs denoting non-motional processes.

t-test did not show any significant difference in distinguishing the unergative verbs denoting motional processes vs. non-motional processes. $t=1.76$, $df=36$, *ns*.

This result can be explained by the fact that the verbs are very close on SIH. However, the results of descriptive statistics have revealed the general trend. Both groups tend to be surer in their judgments about verbs denoting nonmotional process. The fact that the verbs are very close on SIH could influence the results. The prediction that learners have followed the SIH is considered to be partially confirmed.

4. *Do L2 learners distinguish better the unaccusative syntactic behavior of the verbs denoting change of location and worse the behavior of the stative verbs?*

The original prediction was that learners will distinguish better the unaccusative syntactic behavior of the verbs denoting change of location and worse the behavior of the stative verbs.

t-test did not show significant difference in distinguishing the unaccusative verbs denoting change of location vs. the state verbs. $t=0.083$, $df=36$, *ns*.

Scheffé analysis did not reveal the significant differences as well. The hypothesis that the learners follow the SIH is not confirmed.

The results of descriptive statistics have shown the general trend in the judgments though other statistical tests did not confirm the results. The hypothesis that the learners follow the SIH is considered to be partially confirmed.

5. *Do L2 learners show a stronger preference for grammatical sentences over ungrammatical sentences with core unergative and unaccusative verbs, and a weaker preference with peripheral verbs if they recognize the difference at all?*

The original prediction was that learners will show a stronger preference for grammatical sentences over ungrammatical sentences with core unergative and unaccusative verbs, and a weaker preference with peripheral verbs if they recognize the difference at all.

The results of the Descriptive statistics confirm the prediction. NNS show a preference for grammatical sentences over ungrammatical with core unergative verbs and weaker preference with peripheral. Consider Table 4:

Table 4. Mean acceptability judgment on core and peripheral unergative verbs

		NNS	
		Mean	SD
Nonmotional process <i>work</i>	Nom	9.73	1.03
	Gen	4.42	4.1
Motional process <i>swim</i>	Nom	9.56	1.3
	Gen	4.82	4.2

The GN constructions are ungrammatical with unergative verbs. The result of descriptive statistics show that L2 learners are surer about the grammatical Nom case with core unergative verb *work* then with more peripheral verb *swim*. The descriptive statistics showed that there is a tendency to allow more ungrammatical sentences with peripheral unergative verbs. The means of grammaticality judgments were 4.82 for motional process vs 4.42 for nonmotional. However, Scheffé analysis did not reveal the significant differences. This result can be explained by the fact that the verbs are very close on SIH.

The results did not reveal the preference for unaccusative verbs as both constructions are grammatical.

6. *Do grammaticality judgments of L2 learners differ from those of L1 speakers?*

The original prediction was that the grammaticality judgments of L2 learners will differ from those of L1 speakers.

This prediction is confirmed by the results of the Descriptive statistics analysis (see Figures 4 and 5) and ANOVA ($F(3, 28) = 6.295, p < .014$). There is a significant difference between the grammaticality judgments of L2 learners and NS in relation to unaccusative verbs.

7. *Do L2 learners analyze unaccusative verbs as unergatives, following Single Argument Linking Rule, as predicted by Oshita's UTH?*

The original prediction was that L2 learners will analyze all unaccusative verbs as unergatives, following Single Argument Linking Rule, as predicted by Oshita's UTH.

The results of the experiment should be treated with caution as the study is not longitudinal and it shows only the present state of the learners. This is one of the limitations of the study as UTH is a developmental hypothesis.

8. *Have L2 learners achieved near-native proficiency?*

The original prediction was that L2 learners have not achieved near-native proficiency.

The results of the experiment have shown that L2 learners have not achieved near-native proficiency, as they consider ungrammatical forms to be grammatical and their judgments differ from those of NS.

9. *Will L2 learners allow the Genitive Case in all the structures since it is optional?*

The original prediction was that learners will not allow the Genitive Case in all the structures since it is optional

The results of the Descriptive statistics did not confirm this prediction. NNS do allow Gen case though it is optional.

In section 4.3 I will talk about the acquisition of the phenomenon of split intransitivity by heritage learners of Russian. The grammaticality judgments presented by them differ from both native speakers and second language learners. To account for this fact I want to hypothesize that there is a phenomenon of incomplete acquisition of the native language. The fact is understandable as they did not get any formal instruction in Russian before coming to the U.S.

4.3 Heritage Learners

In this section I will touch upon an observation that was made while conducting the research. Among L2 learners there were several heritage learners (HL), who have immigrated from the former Soviet Union to the U.S. when they were from 4 to 6 years old. This factor is relevant to the data collected in the study. Below, I will refer briefly to several definitions of the term *heritage learner*. Then, I will talk about the distinction in language acquisition between NS and HL, NNS and HL, and talk about the recent research on this question. Finally, I will present evidence from the acquisition of the unaccusative - unergative distinction in Russian by heritage learners.

Valdés (2000) refers to heritage speakers as those who are raised in a home where a non-English language is spoken, who speak or merely understand the heritage language, and who are to some degree bilingual in English and the heritage language.

According to Kagan (2001), heritage learners are neither typical students of foreign language nor are they native language speakers. Native speakers learn a language in childhood and continue using it throughout their life in multiple interactions in a full language community. Students acquire a foreign language when their own native language is fully developed. Their full language community will continue to be in the native language. Heritage learners had age appropriate native language skills when they began learning the new language that was to become their primary language because of immigration.

There is a defining distinction between heritage language and foreign language acquisition. Heritage language acquisition begins at home, as opposed to foreign language acquisition which is usually begun in a classroom.

All the participants of this study left Russia or the former Soviet Union. They did not get any formal instruction in Russian language as they did not go to a Russian school. All of them were solely or primarily educated in English. In the United States they continue to speak Russian only with their family members but English has been the dominant language in their university and professional life.

Six participants of the experiment got the same task as native speakers of Russian and foreign language learners. First, they were asked to translate forty words from Russian into English. The data showed that none of them has problems with the vocabulary used in the grammaticality judgment test. However, half of the participants were not certain about the meaning of the verb *существовать* “exist”, as they marked the column “I have seen the word but not sure of its meaning”. But as they gave a correct translation of the word it is considered that they do not experience any lexical difficulties regarding this semantic item. One of the participants marked the word *дракон* “dragon” as unknown at the same time he marked “exist” as unknown, and that may have influenced the grammaticality judgments of the subject. Consider table 5 (on the next page) where the target lexical items and the participants’ responses are shown.

Table 5. Translate from Russian into English (heritage learners)

Translate from Russian into English	Translation	Correct translation.	I know the word	I have seen the word but not sure of its meaning	I don't know the word
1. мальчик	(boy)	100%	100%		
2. письмо	(letter)	100%	100%		
3. ответ	(answer)	100%	100%		
4. дракон	(dragon)	100%	100%		
5. окно	(window)	100%	100%		
6. существовать	(to exist)	100 %	50 %	50%*	
7. шоколад	(chocolate)	100%	100%		
8. студент	(student)	100%	100%		
9. работать	(to work)	100%	100%		
10. врач	(doctor)	100%	100%		
11. прийти	(to come, to arrive)	100%	80%	20%**	
12. телеграмма	(telegram)	100%	100%		
13. плыть	(to swim)	100%	100%		

*One participant did not indicate the translation of the word.

** One participant did not indicate the translation of the word.

Results of Grammaticality judgment task:

Descriptive Statistics

The analysis of the data revealed that grammaticality judgments of heritage learners differ from both native speakers and foreign language learners. There is significant difference in judgments between two categories of unaccusative verbs: verbs of change of location and change of state for NS and HL groups.

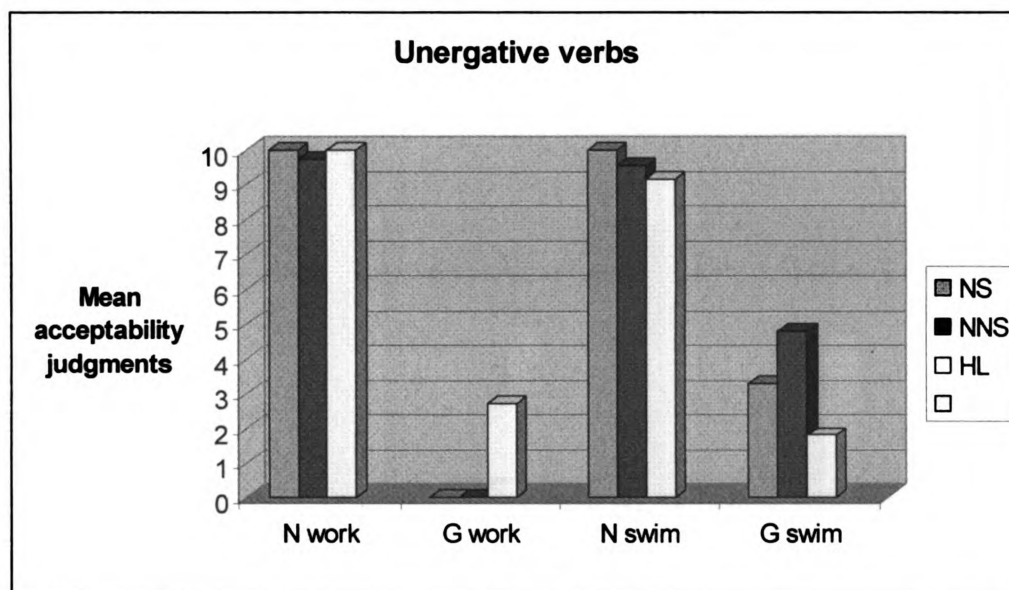
However, no significant differences were obtained among two categories of unergatives verbs: verbs of nonmotional process and verbs of motional process. Table 6 contains the results of Descriptive statistics.

Table 6. Mean acceptability judgment on different verb types

		NS		NNS		HL	
		Mean	SD	Mean	SD	Mean	SD
Nonmotional process <i>work</i>	Nom	10	0	9.73	1.03	10	0
	Gen	3.28	3	4.42	4.1	2.7	2.6
Motional process <i>swim</i>	Nom	10	0	9.56	1.3	9.17	1.6
	Gen	3,28	3	4.82	4.2	1.8	1.9
Change of Location <i>arrive</i>	Nom	9.9	1.5	5.74	4.2	8.3	4.0
	Gen	10	0	6.79	4.21	5	3.69
State <i>exist</i>	Nom	9.6	1.16	7.52	3.67	9.6	0.52
	Gen	9.18	1.01	7.9	3.71	4.83	3.4

The graphical representation of the data is given in figures 9 and 10

Figure 9. Mean acceptability judgments on unergatives.



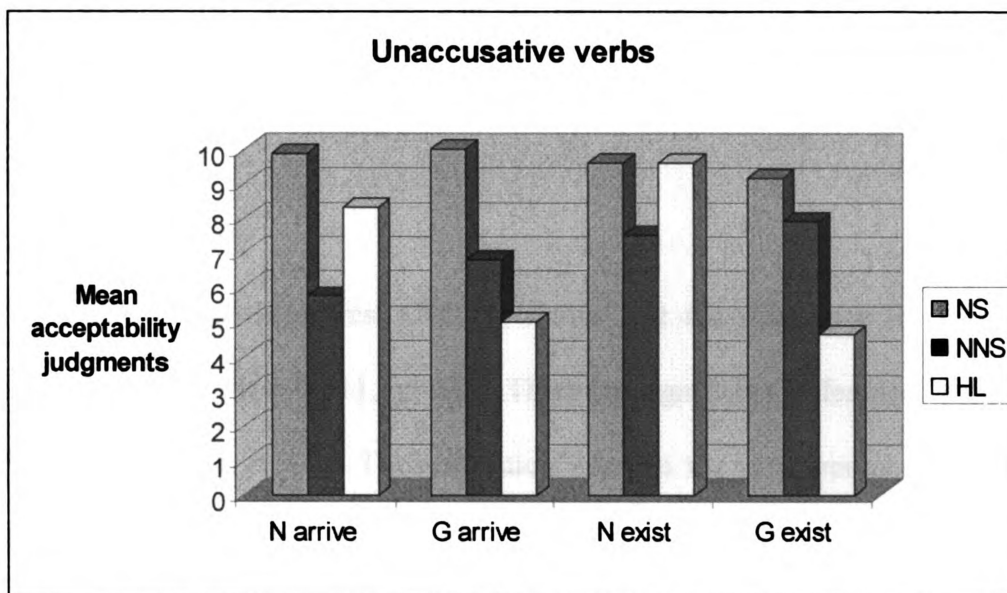
The GN construction is ungrammatical with unergatives. Unexpectedly, HLs allow Gen with unergative verbs, and what is more surprising, they allow it with a core unergative verb: the verb of nonmotional process *work*. Another surprising result was that they less frequently allow Gen with the verb of motional process *swim*, though this is a more peripheral unergative verb. Their judgment is even better than that of NS. They are surer with a peripheral verb than with a core verb. We can stipulate that HL do not acquire these types of verbs as a pattern. They learn each verb separately.

It is difficult to say whether this is a general trend among all HLs of Russian due to the modest sample size.

Figure 10 (next page) represents the grammaticality judgments of the participants with respect to unaccusative verbs.

It was not expected that HLs will prefer Nom case to Gen in the constructions with change of location verbs. They tend to consider Gen ungrammatical with change of location verbs and change of state verbs, and with both types of verbs they prefer Nom

Figure 10. Mean acceptability judgments on unaccusatives.



We got two statistically significant results: on the one hand, NS-HL with the unaccusatives verb arrive+ GEN and on the other, NS-HL with the verb exist + GEN. Heritage learners do not allow Gen case on the argument of unaccusatives verbs. They treat unaccusative verbs as unergatives. The reasons may be the optionality of the case assignment in Russian.

So we can stipulate that IL grammar of heritage learners differs from that of NS. Montrul proposes the explanation of such phenomenon, which she called *incomplete language acquisition* (2004b). HLs do not acquire the language to the same extent as NS.

t-test results

The comparison of verb types between the groups of NS and HL showed a significant difference on one type of unaccusative verbs: change of location. $t = 2.686$, $df=15$, $p < .05$.

There is also a significant difference regarding the second type of unaccusatives verbs: verb of state as well. $t = 3.843$, $df=15$, $p < .05$. One of the explanations can be the fact that HLs are subject to incomplete acquisition as it is discussed by Montrul (2004).

ANOVA and Scheffé

A repeated measures ANOVA shows that the difference in the verb type is significant $F(3, 34) = 5.611$, $p < .001$. There are significant differences between groups, $F(3, 34) = 5.325$, $p < .006$. The interaction between the verb type and the group is also significant, $F(3, 34) = 4.274$, $p < .001$. To find where the significant difference exist post hoc (Scheffé) test was conducted. $p < .05$

The post hoc test shows significant difference between the judgments of HL and NS 2.69, $p < .011$, NNS and NS 1.62, $p < .047$ and there is no significant difference between the judgments of HL and NNS.

The post hoc test does not reveal the significant difference between two verb types; unaccusatives and unergatives.

The next Chapter presents a conclusion.

CHAPTER 5

CONCLUSION AND DISCUSSIONS

The phenomenon of intransitivity has attracted a lot of attention from researches in Second Language acquisition theory. As L2 learners experience problems in acquiring the distinction between two types of intransitive verbs several hypotheses were proposed to account for it. The Split Intransitivity Hierarchy by Sorace was found to explain the variations regarding the acquisition of unaccusative and unergative verbs in Western European languages. The Unaccusative Trap Hypothesis by Oshita accounted for different facts in Japanese and Chinese. This study aims to find evidence of SIH and UTH in Russian, though Russian contrary to Western European languages does not have unambiguous evidence for split intransitivity: the phenomenon under investigation, which distinguishes unaccusative and unergative verbs, is optional Gen case marking allowed by unaccusative verbs. The semantic difference (definite or indefinite interpretation of the argument of the verb), is the only source of differentiating to the optionality in the input.

The results of the study show that learners successfully apply the rule of GN with unaccusatives verbs though they do not have the same pattern as NSs. NSs distinguish core vs. peripheral unaccusatives verbs, but they treat core and peripheral unergatives verbs alike as no significant differences were revealed in their judgments. It seems likely that NSs consider both types of verbs as core as they are very close at the hierarchy. This is one of the limitations of the present study. The appearance of verbs denoting various uncontrolled processes (such as body functions, involuntary reaction and emission),

might attribute to different results as they are more distinct from the verbs denoting nonmotional process according to SIH. The choice of verbs was motivated by the frequency of the verbs in the language and NNSs' awareness of their meaning determined by the vocabulary test.

NS showed a definite preference of Gen vs. Nom case regarding unaccusatives verbs. Though the statistic result did not reach the level of significant difference it can be treated as the possible conformation of SIH.

NNSs do not display the same gradation in their judgments as native speakers, but they seem to develop in the direction of the native pattern. The results of this study should be treated with caution due to the small sample size of the participants and the incomplete coverage of verb types proposed for SIH.

One of the characteristics for Unaccusatives verbs in Russian, GN, is syntactically optional whereas unergatives verbs do not demonstrate any optionality. The fact might lead to the potential difficulties in differentiating these two types of verbs. Learners may prefer one of the choices and disallow another one, or they may apply the rule of optionality to both types of verbs. Research with advanced and near-native learners should be conducted to provide an answer to this question.

L2 learners of Russian differentiate the unaccusative and unergative verbs by allowing GN on unaccusatives but at the same time they allow it on the arguments of unergative verbs. Several reasons may account for this result: the optionality of case assignment and, as the result, lack of unambiguous evidence for the distinction of unaccusatives and unergatives in L2; the subtle evidence for unaccusativity in English.

L2 learners of Russian differentiate the unaccusatives and unergatives depending on the position of monadic verbs on Sorace's SIH. The results of a repeated measures ANOVA shows that the difference in the verb type is significant $F(3, 28) = 6.157$, $p < .001$. However, the Scheffé test did not reveal significant differences between the grammaticality judgments on unaccusative and unergative verbs depending on their position on Sorace's SIH.

The original prediction was that learners will better distinguish the unergative syntactic behavior of the verbs denoting motional processes and worse the behavior of the verbs denoting non-motional processes. The t -test as well as Scheffé did not show any significant difference in distinguishing the unergative verbs denoting motional processes vs. non-motional processes. However, the results of descriptive statistics have revealed the general trend. Both groups tend to be surer in their judgments about verbs denoting nonmotional process. The fact that the verbs are very close on SIH could influence the results. The prediction that learners have followed the SIH is considered to be partially confirmed.

L2 learners distinguish better the unaccusative syntactic behavior of the verbs denoting change of location and worse the behavior of the stative verb. The t -test as well as Scheffé did not show significant differences in distinguishing the unaccusative verbs denoting change of location vs. the change of state verbs. The NS's group considers Gen case more grammatical with verbs of change of location. The results of descriptive statistics have shown the general trend in the judgments, though other statistical tests did not show the significant differences in the results of two groups. The hypothesis that the learners follow the SIH is considered to be partially confirmed.

The original prediction was that learners will show a stronger preference for grammatical sentences over ungrammatical sentences with core unergative and unaccusative verbs, and a weaker preference with peripheral verbs if they recognize the difference at all. The results of the Descriptive statistics confirm the prediction. NNS show a preference for grammatical sentences over ungrammatical with core unergative verbs and weaker preference with peripheral. The GN constructions are ungrammatical with unergative verbs. The result of descriptive statistics show that L2 learners are surer about the grammatical Nom case with core unergative verb *work* than with more peripheral verb *swim*. One of the reasons may be that they are less familiar with the verb *swim* as it is shown by the results of the vocabulary test: only 69% of students marked the column “*I know the word*”. For the verb *work* the result is 100%. The descriptive statistics showed that there is a tendency to allow more ungrammatical sentences with peripheral unergative verbs. However, Scheffé analysis did not reveal the significant differences. The results did not reveal the preference for unaccusative verbs as both constructions are grammatical.

The original prediction that the grammaticality judgments of L2 learners will differ from those of L1 speakers was confirmed by the results of the Descriptive statistics analysis and ANOVA. There is a significant difference between the grammaticality judgments of L2 learners and NS.

The results of the experiment should be treated with caution as the study is not longitudinal and it shows only the present state of the learners. This is one of the limitations of the study as UTH is a developmental hypothesis.

The original prediction that L2 learners will analyze all unaccusative verbs as unergatives, following Single Argument Linking Rule, as predicted by Oshita's UTH was not confirmed. The results of the experiment have shown that L2 learners do not analyze all unaccusative verbs as unergatives as they do allow Gen case on the argument of the verb.

L2 learners allow the Genitive Case in all the structures though it is optional. Some interesting observations were made during the experiment with regard to heritage learners of Russian. The grammaticality judgments presented by them differ from both native speakers and second language learners. To account for this fact I have hypothesized that there is a phenomenon of incomplete acquisition of the native language. The participants did not get any formal instruction in Russian before coming to the U.S. and the only source of language input was their family.

Though, the GN construction is ungrammatical with unergatives, HLs allow Gen with unergative verbs, and what more is surprising, they allow it with a core unergative verb: the verb of nonmotional process. Another surprising result was that they less frequently allow Gen with the verb of motional process *swim*, though this is a more peripheral unergative verb. It is difficult to say whether this is a general trend among the HLs of Russian due to the modest sample size.

HLs prefer Nom case to Gen in the constructions with change of location verbs. They tend to consider Gen ungrammatical with location verbs and change of state verbs, and with both types of verbs they prefer Nom

So we can stipulate that IL grammar of heritage learners differs from that of NS. Montrul proposes the explanation of such phenomenon, which she called *incomplete language acquisition* (2004b). HLs do not acquire the language to the same extent as NS.

Their judgments are not significantly different from those of NNSs. The reason can be the same formal instructions at the university level, comparable to that of NNSs'

There are a number of possibilities for future research on this topic. It would be interesting to investigate the grammaticality judgments of advanced learners of Russian by including in the test other diagnostics of unaccusativity, as well as all types of verbs according to the SIH proposed by Sorace (1995). It would definitely be a good topic for doing further research to investigate if HL are really so different from NS and NNS. For that purpose interesting findings can be produced when comparing them with the advanced L2 learners and NS.

APPENDIXES

APPENDIX A

QUESTIONNARI FOR ENGLISH NATIVE SPEAKERS

1. L1 if other then English _____
2. How long have you been studying Russian? _____
3. Have you been to Russia? How long did you stay there? _____
4. Do you speak Russian outside the classroom? _____
If yes, specify: where and with whom _____

5. Did you take any test of Russian as a foreign language? _____
If yes, what was the score? _____
6. Have you studied any other foreign language? _____
If yes, specify _____

APPENDIX B

QUESTIONNAIRE FOR RUSSIAN NATIVE SPEAKERS

1. L1 if other than Russian _____
2. How long have you been abroad? _____
3. How long have you been in the USA? _____
4. How often do you go to Russia? _____
5. When was the last time you were there? _____
6. How often do you speak Russian? _____
7. Where and with whom do you speak Russian?

8. Have you studied any other foreign language (except English)? _____
If yes, specify _____

APPENDIX C

VOCABULARY TEST

Translate from Russian into English

<u>Translate from Russian into English</u>	Translation	I know the word	I have seen the word but not sure of its meaning	I don't know the word
1. мальчик	(boy)			
2. письмо	(letter)			
3. вода	(water)			
4. найти	(to find)			
5. чувствовать	(to feel)			
6. появиться	(to appear)			
7. ответ	(answer)			
8. вянуть	(to wither)			
9. дракон	(dragon)			
10. угроза	(threat)			
11. лицо	(face)			
12. разлиться	(to overflow)			
13. тонуть	(to sink)			
14. окно	(window)			
15. работать	(to work)			
16. цветок	(flower)			
17. существовать	(to exist)			
18. шоколад	(chocolate)			
19. чихать	(to sneeze)			
20. бояться	(to fear, to be afraid)			
21. листок	(leaf)			
22. улыбаться	(to smile)			
23. учитель	(teacher)			
24. спать	(to sleep)			
25. встреча	(meeting)			
26. студент	(student)			
27. оставаться	(to stay)			
28. телеграмма	(telegram)			
29. молоко	(milk)			
30. мороз	(frost)			

31. ветер	(wind)			
32. журнал	(magazine)			
33. должен	(must, have to)			
34. петь	(to sing)			
35. театр	(theatre)			
36. плыть	(to swim)			
37. смеяться	(to laugh)			
38. быть	(to be)			
39 врач	(doctor)			
40. прийти	(to come, to arrive)			
41. читать	(to read)			
42. чай	(tea)			
43. подниматься	(to arise)			
44. сидеть	(to sit)			

APPENDIX D

INSTRUCTION GIVEN TO SUBJECTS

The purpose of this exercise is to get you to judge the acceptability of some Russian sentences. These sentences are all different. Some will seem better to you, but others will not. What we are after is not what you think of the meaning of the sentence, but what you think of the way it is constructed. Your task is to judge how good or bad each sentence is by assigning a number to it. First we will do a small exercise: you need to judge the length of the lines, which I show you and give the number for it.

1. _____

You don't need to give the exact length. Only approximate. **8**. The next line I show you:

2. _____

is twice as short as then the first one, and you will assign it **4**. The next line is twice as large as the first one:

3. _____ you

will assign it 16.

Now we will try to do the same with Russian sentences: for each sentence, assign a number to show how good or bad that sentence is in proportion to the first sentence in a set.

For example, the first sentence is:

(1) *the cat the mouse ate.*

If it seems bad, you would give it a small number, 10 for example and if the next example:

(2) *the cat ate the mouse*

is 10 times better for you then you should give it 100, and if the next example:

(3) *cat the mouse ate the.*

Seems to be 2 times worse you will assign it 5.

Use any number you like for the first sentence. Judge each sentence in proportion to the reference sentence. Use any positive numbers you think appropriate. There are no 'correct' answers, so whatever seems right to you is a valid response. Only your first impression is important, so don't spend too much time thinking about your judgment.

APPENDIX E

GRAMMATICALITY JUDGMENT TEST

Below is one of the variants of the test. The second variant consisted of an equal number of the same sentences but organized in different order. The symbol “*” indicates the ungrammaticality of the sentence. The target sentences and the distractors are separated here. In the original test they were presented in the mixed order.

Grammaticality judgment test (target sentences)

1. Студента не пришло. **Student (Gen) didn't arrive (Neut.)*
2. Студента не пришел. **Student (Gen) didn't arrive (Masc.)*
3. Студент пришел. *Student (Nom) arrived(Masc.)*
4. Студента пришло. **Student (Gen) arrived (Neut.)*
5. Студент не пришло. **Student (Nom) didn't arrive (Neut.).)*
6. Телеграммы не пришло. *Telegram (Gen) didn't arrive (Neut.)*
7. Телеграмма не пришла. *Telegram (Nom) didn't arrive (Fem.)*
8. Телеграммы не пришла. **Telegram (Gen) didn't arrive (Fem.)*
9. Телеграммы пришло. **Telegram (Gen) arrived (Neut.)*
10. Телеграмма пришла. *Telegram (Nom) arrived(Fem.)*

11. Врача не работает. **Doctor (Gen) does not work*
12. Врач не работает. *Doctor (Nom) does not work*
13. Врача работает. **Doctor (Gen) works*
14. Врач работает. *Doctor (Nom) works*
15. Мальчика не плавает. **Boy (Gen) does not swim.*
16. Мальчик не плавает. *Boy (Nom) does not swim.*
17. Мальчика плавает. **Boy (Gen) swims.*

18. Мальчик плавает. *Boy (Nom) swims.*
19. Не плавает мальчик. *Boy (Nom) does not swim*
20. Не работает врач. *Doctor (Nom) does not work*
21. Драконы не существуют. *Dragons (Nom) don't exist*
22. Драконов не существует. *Dragons (Gen) don't exist*
23. Драконы существуют. *Dragons (Nom) exist*
24. Драконов существует. **Dragons (Gen) exist*
25. Врача не работает. *Doctor (Gen) does not work.*
26. Драконов не существует. *Dragons (Gen) don't exist.*
27. Мальчика не плавает. **Boy (Gen) does not swim.*
28. Ответа не пришло. *Answer (Gen) didn't arrive (Neut).*
29. Студента не пришло. **Student (Gen) didn't arrive (Neut).*

Grammaticality judgment test (distractors)

30. Я не пишу писем) . *I don't write letters (Gen)*
31. Я не пишу письма. *I don't write letters(Acc)*
32. Я пишу карандашом. *I write with a pencil (Instr)*
33. Я пишу писем. **I write letters (Gen)*
34. Я пишу письма. *I write letters(Acc)*
35. Девочка пишет. *The girl writes*
36. Писем я пишу. **Letters (Gen) I write*
37. Письма я пишу. *letters(Acc)I write*
38. Девочки пишет. **The girl (Gen). writes*
39. Я пишу карандаша. *I write with a pencil(Gen)*
40. Не читает девочка. *Doesn't read the girl*
41. Девочка читает. *The girl reads*
42. Девочки читают. *The girls read*
43. Девочка не читает. *The girl doesn't read*
44. Девочки не читают. *The girls don't read*

45. Читает девочка. *Reads the girl*
46. Читают девочки. *Read the girls*
47. Не читают девочки. *Don't read the girl/girls*
48. Читают девочка. *Reads the girl*
49. Читает девочки. *Reads the girls.*

50. В доме не живет девочка. *In the house doesn't live a girl(Nom)*
51. Живет дом девочка. **Lives the house a girl (Nom)*
52. Девочка у дома живет. **The girl lives near the house*
53. Девочка не живет в доме. *The girl (Nom) doesn't live in the house.*
54. Книга в доме живет. *The book(Nom) in the house lives*
55. Живет в доме книга. *Lives in the house a book(Nom)*
56. Книга не живет в доме. *The book (Nom doesn't live in the house*
57. Книга живет на доме. **The book (Nom lives on the house*
58. Книг живут в доме. **The books (Acc) live in the house*
59. Книга живут в доме. **The book(Nom) live in the house*

60. В доме не было окно. **In the house there was no window(Nom)*
61. В доме не было окна. *In the house there was no window(Acc)*
62. Окно в доме не было. ** There was no window(Nom) In the house*
63. Окна в доме не было. *There was no window(Gen) In the house*
64. Окна в доме было **There was a window(Gen) in the house*
65. Окно в доме было. **There was a window(Nom)) in the house*

66. Девочка любит шоколад. *The girl (Nom) likes chocolate (Acc).*
67. Девочки любит шоколад. **The girl (Gen) likes chocolate (Acc).*
68. Девочка любит шоколада. **The girl (Nom) likes chocolate (Gen).*
69. Девочка не любит шоколад. *The girl (Nom) does not like chocolate (Acc).*
70. Девочка не любит шоколада. *The girl (Nom) does not like chocolate (Gen).*
71. Девочка шоколада не любит. *The girl (Nom) chocolate (Gen) does not like.*
72. Девочка шоколад не любит. *The girl (Nom) chocolate (Acc) does not like.*
73. Шоколад девочку не любит. *The chocolate (Nom) the girl (Acc) does not like.*

74. Шоколада не любит девочка. *The chocolate (Gen) the girl (Nom) does not like*
75. Шоколад не любит девочку. *The chocolate (Nom) does not like the girl (Acc).*

76. Шоколад не любит девочку. *The chocolate (Nom) does not like the girl (Acc).*
77. Книга живет в доме. *The book (Nom) lives in the house.*
78. Девочка не читает письмо. *The girl (Nom) doesn't read the letter (Acc)*
79. Шоколада нет. Девочка его съела. *There is no chocolate(Acc). The girl has eaten it.*
80. Не хорошая идея пришла мне в голову. *Not a good idea comes into my mind.*

81. Зеленая идея пришла мне в голову. *A green idea came into my mind.*
82. Мне пришла зеленая идея в голову. *Came a green idea into my mind.*
83. В голову мне пришла зеленая идея. *Into my mind came a green idea.*
84. Хорошая идея пришла мне в голову. *A good idea came into my mind.*
85. Хорошая мне в голову пришла идея. *A good came into my mind idea.*
86. Не хорошая идея пришла мне в голову. *Not a good idea came into my mind.*
87. Не хорошая пришла мне в голову идея. *Not good came into my mind an idea.*
88. Не хорошая в голову идея пришла мне. *Not good into my mind idea came.*
89. Хорошая идея пришла мне в голову. *A good idea came into my mind.*
90. Хорошая пришла идея мне в голову. *A good come idea into my mind.*

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