Vulnerable L2 Semantics: The Case of Russian Dative Subjects∗

Ulyana Savchenko
University of Toronto

Semantics is argued to be a difficult domain in the second language acquisition. An experiment was conducted on the second language (L2) acquisition of the semantics of Russian impersonal constructions with dative subjects. 13 very advanced English speakers of Russian completed a grammaticality judgment (GJT) and a semantic decision task. The GJT showed that L2 learners have a solid knowledge of Russian morphosyntax. The results on the semantic decision test revealed that the lower proficiency speakers do not have semantic intuitions underlying their L2 grammatical structures. The higher proficiency L2 group performed comparably to the native group; nonetheless, there was a difference between the native group and high proficiency L2 speakers. It is suggested in this paper that the syntax-semantics interface is problematic in the L2 learning.

1. Introduction

This paper reports an experimental study on the second language acquisition (SLA) of the semantics of Russian impersonal constructions with dative subjects by native speakers of English. While quite popular in theoretical domains, the topic of the semantics of dative subjects has escaped empirical applications, especially in the second language acquisition field.1 The general research question this study is concerned with is whether second language (L2 henceforth) learners are able to attain a native-like comprehension of the semantic subtleties of the target language. Alternatively, if the study shows that L2 comprehension is not native-like, the question arises to what extent the target semantics is accessible to L2 learners.

Experimental studies on the second language acquisition of semantics are amply represented in the recent literature. The range of the findings of final state acquisition of L2 semantics varies from impossible (e.g., Coppieters 1989) to fully possible (e.g., Slabakova 2003). To my knowledge, there is no research that examines the semantics of Russian dative subjects found with impersonal constructions in a systematic and principled way. Thus, this paper is set out to examine the inquiry.

In Russian, like in many other languages (Spanish, Icelandic, Polish, to name a few), certain types of verbs can take non-nominative subjects. These are psychological (or psych) (like, frighten, etc.) and activity (read, work, etc.) verbs, modal (must, etc.) and adjectival predicates (need, envious, etc.).

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1 The bulk of the research is devoted to the acquisition of argument structure. Particularly, the researchers are interested in the principles, if there are any, that guide L2 learners to link thematic roles to syntactic positions. The syntax of dative subjects was investigated in works by White et al. (1998), Montrul (1997, 1998), Juffs (1996), to name a few.
This study examines only psychological (or psych) (1) and activity (2) verbs, which can take either nominative or dative subjects as illustrated below:

(1) Psychological verb
   a. Ya uslyshala shagi na krishe.  
      I.NOM heard.PRF steps on roof  
      ‘I heard steps on the roof.’
   b. Mne poslyshalis’ shagi na krishe.  
      Me.DAT heard.REFL.PRF steps on roof  
      Intended meaning: ‘I think I heard steps on the roof.’

(2) Activity verb
   a. Vchera nochju ya ne spala.  
      Yesterday night.INST I.NOM not slept.F  
      ‘I didn’t sleep yesterday night.’
   b. Vchera nochju mne ne spalos’.  
      Yesterday night.INST me.DAT not slept.REFL.IMPF  
      Intended meaning: ‘For some reason, {I couldn’t sleep/ I didn’t feel like sleeping} last night.’

The (b) sentences have a different morphosyntactic makeup: i) the subject is in the dative case, ii) a non-agreeing or a default verb is suffixed with the reflexive –sja (-s’ after vowels) deriving the so-called ‘non-active’ verbal form; iii) if there is a nominative argument, the verb is in agreement with it.

The semantic distinction encoded by the morphosyntax is not transparent at all and could render difficulties for L2 acquisition. The nominative structures overtly indicate that the nominative agent (2a) or experiencer (1a) is in control of the state/event described by the verb. By contrast, the dative impersonal construction entails no control on behalf of the dative experiencer over the state/event described by the verb. The dative alternant receives the so-called ‘feel like’ interpretation, or an experiencer interpretation.

Native speakers of English are ideal subjects to test L2 knowledge of Russian impersonal constructions with dative subjects. English L1 grammar does not contain the same kind of alternation with psych and activity verbs. An account of L1 transfer would be untenable, which calls for investigation into deeper level of mental representations of second language learners. This contrast between constructions in the two languages is discussed in the next section, as well as the analysis of impersonal constructions with dative subjects in Russian.

In section 3 I present a short survey on the previous L2 research of impersonal and psych constructions. An experimental study with 13 very advanced English speakers of Russian is the topic of section 4. Participants completed two tasks – a grammaticality judgment (GJT) and a semantic decision task. The results of the study will be discussed and conclusions drawn in section 5.

2. Properties of Dative Impersonal Constructions

2.1 Russian Psych Verbs with Nominative and Dative Subjects

Psychological predicates (verbs that describe psychological or mental states) in Russian with their tripartite classification (3) (Holloway-King 1993) and case-marked arguments non-trivially differ from English bipartite psych predicates. These verbs involve a participant, an experiencer, the individual who experiences the mental state described by this verb. Since Belletti & Rizzi (1988)
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(B&R henceforth), psych verbs have been grouped into three classes depending on the case of the experiencer that occurs with this verb.

(3) **Class I: Nominative Experiencer** (boyatsja ‘fear’, nenavidet’ ‘hate’, xotet’ ‘want’, etc.)

Sema ljubit Mashu.
Sema.NOM loves Mary.ACC

‘Sema loves Mary.’

**Class II: Accusative Experiencer** (udivlyat’ ‘surprise’, privlekat’ ‘attract’, zlit’ ‘anger’)

Sema razvlekaet Mashu.
Sema.NOM amuses Mary.ACC

‘Sema amuses Mary.’

**Class III: Dative Experiencer** (dokuchat’ ‘annoy’, razdrazhat’ ‘irritate’, etc.)

Sema nadoedaet Marii.
Sema.NOM bothers Mary.DAT

‘Sema bothers Mary.’

While nominative experimenters (3a) are straightforwardly analyzed as regular transitive structures, accusative and dative experimenters (3b-c) are famously problematic for the thematic hierarchy of clausal arguments. Themes are linked to a subject position, whereas experimenters – which are higher on the thematic hierarchy – are linked to an object position. In short, experimenters with different psych verbs are linked to different syntactic positions. This poses a problem for the uniform analysis of experiencer arguments. B&R proposed an unaccusative analysis for the second (accusative) and third (dative) classes of psych verbs. However, their analysis proved to be untenable, as argued in subsequent work by Grimshaw (1990), Pesetsky (1995) and Landau (2009), among others.

Russian psych verbs with nominative experimenters are not exceptional and so these experimenters occupy the structural subject position in a clause (4a). However, the same verbs can as well take dative subjects with the addition of a reflexive morpheme –sja (-s’) on that verb. This was shown in (1) and is repeated here in (4):

(4) a. Ya uslyshala shagi na krishe.
   I.NOM heard.PRF steps on roof
   ‘I heard steps on the roof.’

b. Mne poslyshalis’ shagi na krishe.
   Me.DAT heard-REFL.PRF steps on roof
   ‘I heard steps on the roof.’

What is the difference between the two sentences besides the obvious morphosyntactic one? The nominative subject in (4a) can be characterized as having an agent-like property in addition to being an experiencer. This claim at first sounds controversial considering that psych verbs are said to have an experiencer, and not an agent, argument. However, Russian data show that an experiencer of class I psych verbs has some agent-like properties, which, as I propose, can be coded in features. The meaning the nominative experiencer conveys reads as ‘I was in a state of complete mental awareness’. A sentence with the nominative is thus entirely natural with an agentive adverb such as purposely (5a). The dative counterpart, by contrast, indicates that there is no kind of control available to an individual and that the dative is the experiencer par excellence. (5b) illustrates that the dative is infelicitous with the agentive adverb purposely. The two opposites, therefore, surface in two different contexts – the ability to control emotional states, or [+control], and the inability to control emotional states, or [-control]. To formalize the difference, I propose to code individuals in these contexts with
Note the feature Control I propose for the nominative experiencers is weaker than that of regular agents. Further examination into the agentivity of experiencers (at least in Russian) is needed.

(5) a. Ya namerenno xotel opozdat’ na uzhin.  
   I.NOM purposely wanted.IMF.M be-late.INF on dinner
   ‘I purposely wanted to be late for a dinner.’

   b. Mne (*namerenno) xotelos’ opozdat’ na uzhin.  
   Me.DAT purposely wanted-REFL.IMF be-late.INF on dinner
   ‘I wanted to be late for a dinner.’

Wierzbicka’s (1996: 69) research on identical Russian constructions emphasizes that dative constructions (Mne xochetsja (me.Dat want+-sja)) are semantically marked in contrast with nominative structures (Ya xochu (I want)). In nominative structure subjects are usually responsible for mental activities (which are not necessarily premeditated however), whereas dative constructions explicitly deny such a responsibility on a part of a dative experiencer. I take this to support my proposal.

2.2 English Psych Verbs

In English experiencer arguments can be marked with either nominative or accusative case, and thus represent two main classes of psych verbs (Jackendoff 1990, Levin 1993), as shown in (6):

(6)  FEAR class: Experiencer-subject (admire, detest, enjoy, hate, miss, respect; marvel at)  
   John fears dogs.
   
   FRIGHTEN class: Experiencer-object (amuse, embarrass, irritate, worry; appeal to)  
   Dogs frighten John.

Like in Russian, English sentences with verbs in the fear class are straightforwardly analyzed as regular transitive structures with an experiencer occupying structural subject position and a theme occupying object position. The class of accusative-experiencer predicates (frighten type) roughly corresponds to class II of Russian psych verbs. The problem of mapping thematic structure to syntactic structure extends to the English frighten-type predicates as well, however, we need not deal with this here. As for dative experiencers, they no longer occur in English (Pesetsky (1995) mentions a few remaining verbs in this class, such as appeal to).

In English there are no dative subjects and/or experiencers and, therefore, there are no nominative-dative experiencer alternations like those found in Russian with class I psych verbs (see (4) above). Curiously, English speakers’ intuitions are that nominative experiencers are not controllers of the states described by class I psych verbs (in contrast to Russian nominative experiencers which are controllers of the states). And yet a nominative experiencer is a subject structurally. Obviously, then, in English there is no one-to-one mapping between thematic and structural hierarchies of arguments, as would be the case had the agent (the controller of the state/event) been exclusively mapped into nominative. Thus, English nominative experiencers, lacking any control over the state/event described by the verb, are structural subjects.

2 Intuitions about the presence vs. absence of control with nominative and dative experiencers have been collected from native speakers of Russian. English and Italian speakers (to whom I have communicated the difference in Russian) have very strong judgments about the absence of control. Interestingly, these languages do not have dative alternants with class I psych verbs.
2.3 Russian Activity Verbs and Dative Subjects

The second type of verbs in this study that takes dative subjects in Russian is commonly referred to as unergative (verbs which have only one argument – structural subject) such as walk, work, sleep, and read (7a), etc. Some of these verbs, however, can optionally take a theme argument (7b). Russian is not exceptional in this respect, as sentences like I walked the dog and the English translation of (7b) are quite natural in English. The parallel between the two languages ends there, since Russian also displays dative subjects with these verbs (marked with the reflexive –sja/~s’), shown in (7c-d):³

(7) a. Ya pochitala s udovol’stviem.
   I.NOM PO-read.PST.PRF.F with udovol’stviem.
   ‘I read with pleasure.’

b. Ya prochitala rasskaz {umyshlenno/ s udovol’stviem}.
   I.NOM PRO-read.PST.PRF.F tale deliberately with pleasure
   ‘I read the tale {deliberately/with pleasure}.’

c. Mne pochitalos’ (*umyshlenno) s udovol’stviem.
   Me.DAT PO-read-REFL.PST.PRF.F (deliberately) with udovol’stviem.
   ‘I read (a little bit) with pleasure.’

d. Mne rasskaz prochitalsja (*umyshlenno) s udovol’stviem.
   Me.DAT tale.NOM.M PRO-read-REFL.PST.PRF.M (deliberately) with pleasure
   ‘I read the tale with pleasure.’

The differences between nominative and dative alternants in morphosyntax are narrowed down to the following: i) the subject is in the dative case (7c,d), ii) a non-agreeing or a default verb suffixed with the reflexive –sja (~s’) deriving the ‘non-active’ verbal form; iii) if there is a nominative argument, the verb is in the agreement with it (7d).

As with psych verbs, I suggest that the semantic difference between the nominative (7b) and dative (7c,d) counterparts is attributed to the feature ‘ability to control states/events’, or Control. Namely, the nominative sentence implies that the act of reading was done by the agent in a state of conscious (self-) control (that is, the reader intentionally engages at reading). Thus, the nominative subject is [+control]. This is also evidenced by felicitous construal with the agentive adverb deliberately (7b). The dative sentence, in contrast, implies that the state in which the action of reading was being done was still conscious, but due to some factors extraneous to the experiencer (such as the book being so intriguing, for instance), was uncontrollable by the reader. The dative experiencer is thus [-control] and is not acceptable with agentive adverbs such as deliberately (7c,d).

2.4 The Analysis of Dative Impersonal Constructions

A considerable number of syntacticians (Neidle 1988, Greenberg & Franks 1991, Schoorlemmer 1994, Kondrashova 1994, Moore & Perlmutter 2000, Perlmutter & Moore 2002, etc.) provide insightful analyses as to the structural/derivational properties of impersonal structures with datives, overlooking, however, their special semantic interpretations. Benedicto (1995) proposes a formal semantic analysis that holds that Russian dative impersonal constructions have modality

³ (7d) seems to be marginal for some speakers but totally grammatical for others, which, in fact, reflects many analyses that advocate that the reflexive morpheme absorbs accusative case and that this is why a nominative theme is ungrammatical in impersonal constructions (cf. se/si in Romance languages as analyzed by Reinhart (1996), etc.). I attribute this split in judgments to dialectical differences (indeed, my control group consisted of individuals from different Russian-speaking countries).
readings thus unifying Russian impersonals with other modal constructions in Russian. However, this analysis is not adequate since there is a fundamental difference in interpretation between impersonal and modal structures, as is argued in Savchenko (2008). I propose a new analysis of impersonal constructions with dative subjects as schematized in (8):

(8) 

\[
\begin{align*}
\text{ApplP} & \\
\text{Dat} & \\
\text{Appl'} & \\
\text{C-Domain} & \\
\text{Appl}_0 & \\
\text{TP} & \\
\text{Nom} & \\
\text{book} & \\
\text{vP} & \\
\text{Spec} & \\
\text{v'} & \\
\text{V'} & \\
\text{V} & \\
\text{DP} & \\
\text{V}_0 \text{-sja} & \\
\text{read} & \\
\theta & \\
\end{align*}
\]

The assumptions of the analysis are the following: dative subjects – experiencers – are located in a high Applicative Phrase (Pylkkänen 2002, Rivero 2003, Adger & Ramchand 2007, a.o.), which syntactically renders them adjuncts. As adjuncts, datives can be dropped out leaving the structure syntactically unaffected (9b). Interpretationally, datives in the Applicative Phrase can be compared to the Topic Phrase, which, in fact, is what they are – formal topic of the construction.

(9) a. Studentam kniga prochitalas’ s udovol’stviami.
   ‘Students DAT book.F NOM read-REFL.3SG.F with pleasure’

b. Kniga prochitalas’ s udovol’stviami.
   ‘One / The book was} read with pleasure.’

I assume that the dative in the Applicative is assigned inherent case and the theta-role of an experiencer\(^4\). I can think of two reasons why the dative is not structural in the configuration under study: first, semantically, dative is the subjects of a predication, or its topic, and as such it cannot base-generate as a complement of the verb (with either recipient, benefactor, or a goal theta-role) with subsequent raising to the Spec,TP or Spec,ApplP; second, in the presence of the nominative

\[^4\text{Landau (2009) proposes the prepositional analysis for non-nominative experiencers, that is, non-nominative experiencers are prepositional objects, governed by the null or dative preposition. In this account, non-nominative experiencers move to the second Spec,TP (occupied by the PP) from either subject (stative Subject Experiencer) or object (eventive Object Experiencer) position of the lexical verb and get their case assigned by the preposition. I refer the interested reader to Landau (2009) for details.}\]
theme, whose case is structural, the only other structural case that can be licensed is accusative, which is ruled out by the structure due to the presence of the reflexive.

The reflexive suffix –sj is instrumental in the impersonal construal. In my analysis, this morpheme originates in the VP and attaches directly to the V as seen in (8). Besides the arity-reducing effect that it has on the verbal/syntactic structure (it ‘devours’ the accusative case and the external theta-role), semantically it feeds the structure for agentless dative-experiencer interpretation.

Interpretationally, the dative impersonal construction entails no control on behalf of the dative experiencer over the state/event described by the verb. As was shown above, this lack of control can be diagnosed by the presence vs. absence of agentive adverbs such as ‘deliberately’ (7). Thus, nominative and dative surface in two different contexts – the ability to control emotional states/events, or [+control], and the inability to control emotional states/events, or [-control]. One other purpose of the Applicative phrase, then, is to discharge the feature [-control] on the individual in the dative.

The high Applicative Phrase is in the C-domain, the domain widely understood to be interfacial between syntax and other modules of grammar such as semantics and pragmatics. The material that appears in the C-domain is the so-called ‘aboutness’ or “what the sentence is about” (Reinhart 1981). Indeed, the dative experiencer is such a participant whose feeling and desires are relevant to the interpretation of the impersonal sentence.

In my view, dative experiencers in impersonal constructions are not structural objects. As such, they do not move from lower positions (be it ApplP sandwiched between TP and vP (as in Adger & Ramchand (2007)), or be it the Spec vP moving to Spec TP (as in Landau (2009)) for the reason of preference of Merge over Move (or economy reasons, cf. Chomsky 1995). That is to say, dative experiencers merge in the Spec of the high Applicative Phrase.

Based on the formal properties of the impersonal dative construction outlined above, let me articulate next the learning task an L2 learner is faced with and predictions for the study.

2.5 Learning Task and Predictions

It was established above that English nominative experiencers are not [+control] unlike their Russian counterparts, and that Russian dative experiencers are, in fact, equivalent to English nominative experiencers in terms of their semantic features. Therefore, with respect to semantic features of arguments, the foremost task an English-speaking learner of Russian is faced with is to associate the nominative experiencer in English with the dative one in Russian (assuming the learner is advanced and has internalized Russian morphosyntax), as schematized below:

L1 English Nominative Experiencer \( \rightarrow \) L2 Russian Dative Experiencer = [-control].

The next step is to reanalyze the nominative experiencer as an individual capable of control:

L1 Nominative Experiencer [-control] \( \rightarrow \) L2 Nominative Experiencer [+control].

The learner thus ends up with a branching representation of the L2 experiencer conditioned by the case assigned to it:

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5 Rizzi (1997) defines the C-domain as “the interface between a propositional content (expressed by the IP) and the superordinate structure (a higher clause or, possibly, the articulation of discourse, if we consider a root clause).” (p.283).
This sort of reassociation and reanalysis involves learning extra features not instantiated in the L1 set. Features [+/-control] are discharged on the experiencer depending on the verb (active without the reflexive or non-active with the reflexive). In addition to the [-control] dative experiencer, an L2 learner has to learn the obligatory cooccurrence of the dative with the reflexive – sja on a verb. Ultimately, an L2 learner has to learn that in Russian dative experiencers with class I psych verbs and activity verbs are as licit and productive as are nominative constructions.

Once the learner acquires the morphosyntactic pieces of the constructions, what remains for learning Russian impersonal constructions? The analysis proposed above predicts that a learner will have to extend the L1 set of functional projections with experiencer arguments (English experiencer subjects are hosted in the Spec of AgrpP) and include a high Applicative phrase in the L2 inventory. This learning scenario involves activation of new functional categories, namely, a zero applicative head – Appl0 – that mediates the specific interpretation ‘feel-like V-ing’, or ‘I am in the mood for V’ of impersonal constructions.

Predictions for this study are constructed with two theories of L2 learning mechanism in mind. The fist one is the ‘Full Access/Full Transfer’ (Schwartz & Sprouse 1996; White 1989, etc.) that assumes that the initial state of L2 learners is their L1 grammar, which in the process of acquisition is being restructured in virtue of L2 input interacting with the Universal Grammar (=UG).

The second theory, known as the ‘Partial Access to UG’, is represented by the following hypotheses: the Local Impairment Hypothesis (Beck 1998) that states that the features of functional categories are impaired in L2 acquisition because the feature strength is permanently inert in the learners’ grammatical representation; and the Valueless Feature approach of Eubank (1994, 1996), according to which at initial stages of learning all functional categories can be transferred from the L1, but their specifications cannot, so functional features have no values until the learner acquires particular values in the target grammar.

The predictions for the study are:

1) Both parameter resetting and learning new functional categories and their features involve access to new features or new values of existing features. Therefore, if features of functional categories are permanently impaired in adult L2 acquisition (Beck 1998, Hawkins & Chan 1997), the learner will not exhibit knowledge of the ‘feel-like’ semantics associated with dative experiencers coupled to reflexivized verbs. As a result, L2 learners would use L2 morphology with feature specifications of their L1.

2) By contrast, if access to new functional categories and features is available in L2 acquisition, an advanced (or near-native) learner will have no trouble interpreting impersonal constructions in a target-like manner. This outcome reflects the Full Access/Full Transfer hypothesis (Schwartz & Sprouse 1996, White 1989). The syntactic reflexes of –sja and dative case on the subject will provide clues for the target semantics.

3) The L2 learner, at initial stages of learning, will transfer all functional categories from the L1 but not their specifications, so functional features will have no values until the learner acquires particular values in the target grammar, or until the learner’s knowledge matures (Eubank’s (1994, 1996) Valueless Features hypothesis).

I have no predictions with respect to the order of acquisition of the morphemes – either the dative case marker primes the presence of –sja, or vice versa. This is not principled.
3. Previous Research on the L2 Acquisition of Impersonal and Psych Constructions

To the best of my knowledge, there is no study reported that looks into the L2 semantic properties of Russian dative subjects. A few available studies question comparable properties reflected by different functional categories in other languages. Thus, Bruhn-Garavito (2000) examines L2 knowledge of the reflexive clitic *se* that appears in impersonal and inchoative constructions, and the dative clitic *le* that appears in dative subject constructions with certain psych verbs in Spanish. The Spanish *se/le* structures exhibit subtle properties not easily inferable from the input. It is thus ideal to compare the knowledge of L2 learners to that of native speakers on the example of *se/le* structures. Bruhn-Garavito concludes that the results show that L2 learners are able to achieve a final state grammar. Also, there is no evidence that the L2 final state grammar differs from the grammar of native speakers. The researcher believes this to be evidence that UG is available in adult second language acquisition.

Montrul (1998) conducted a study on the acquisition of argument structure of dative experiencer verbs in Spanish. The researcher asked whether English and French learners of Spanish attain the following properties of the target grammar: a) dative marked experiencers are not objects but logical subjects, b) the dative argument is the most prominent argument regardless of the dative case. Overall results showed that learners have access to the thematic hierarchy, which supports the idea that UG is activated in L2 acquisition. However, L1 plays an important role in case assignment and checking mechanisms in L2 acquisition.

Next I present an experimental study on the acquisition of Russian dative impersonal constructions described above by English learners of Russian.

4. The Study

4.1 Participants

The study included 13 English learners of Russian (recruited and tested in Middlebury language school, Vermont, USA) and 10 native speakers of Russian constituting a control group. Since this study aimed at testing subtle knowledge of the semantics, English participants were recruited from among very advanced speakers: language instructors, graduate students and the highest-level undergraduate students (only 2) in the Russian language program. Their mean age was 28.3 and ranged from 22 to 52. The age of first exposure to Russian varied from 8 to 20, with the mean age being 16.8. All subject started learning Russian after the age of puberty, and all had spent some time in a Russian speaking country. Table 1 summarizes participants’ age, age of first exposure, years lived in a Russian speaking country, and hours of speaking, listening, and reading Russian per week.
Table 1. Participants’ information (NNS = non-native speakers; NS = native speaker)

<table>
<thead>
<tr>
<th>Participants</th>
<th>Age</th>
<th>Age of first exposure</th>
<th>Years lived abroad</th>
<th>Hours per week*</th>
</tr>
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<tr>
<td>NNS (n = 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>28.3</td>
<td>16.8</td>
<td>15.7 months</td>
<td>53.3</td>
</tr>
<tr>
<td>Range</td>
<td>22-52</td>
<td>8-20</td>
<td>1-48 months</td>
<td>2-165</td>
</tr>
<tr>
<td>SD</td>
<td>8.8</td>
<td>3.4</td>
<td></td>
<td>47.5</td>
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<tr>
<td>NSs (n = 10)</td>
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<td>M</td>
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</tr>
<tr>
<td>Range</td>
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</tr>
<tr>
<td>SD</td>
<td>11.6</td>
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</tbody>
</table>

*Participants were recruited in Middlebury language school. Some of them gave an hour breakdown according to the school schedule and not according to their regular social situations outside of school – thus the highly ranged scale.

Four independent measures of proficiency – 1) L2 learners’ self-assessment, 2) native speakers’ judgments of L2 learners’ proficiency, 3) grammatical distractors, and 4) ungrammatical distractors within the Grammaticality Judgment Task, were used to evaluate L2 learners’ proficiency level. L2 subjects were subsequently divided into two groups – the lower proficiency group included 5 subjects, and the higher proficiency included 8.

4.2 Method

Subjects completed three tasks, a language assessment questionnaire, a pen-and-paper Grammaticality Judgment test, and a Semantic Decision test. The questionnaire’s design allows a researcher to evaluate each aspect of language use - speaking, writing, listening, and reading in the subject’s social, academic, and cultural environments. The main task was the Semantic Decision test. The GJ test served as a kind of pre-test, as described in the following subsection. There was no time limit to complete the test.

4.2.1 Grammaticality Judgment Task

The Grammaticality Judgment Task consisted of 12 grammatical and 12 ungrammatical sentences. Five distractors were included making a total of 30 sentences. Sentences were judged on a five-point Likert scale ranging from -2, fully ungrammatical, to +2, fully grammatical. Participants were instructed to answer ‘0’ if they had no intuition on the grammaticality of a given sentence. However, participants were discouraged to choose ‘0’ as an answer.

This task was designed to test whether L2 speakers have knowledge of the cooccurrence of dative subjects with reflexive morphology on a verb. Recall that dative subjects and reflexivized verbs are in a non-agreeing relation and the verb is in the default form (i.e., 3rd person singular). The stimuli were constructed with three psych (feel, doze, see) and three activity (talk, live, run) verbs. Each verb appeared in four conditions: with a nominative subject and no reflexive marker (grammatical) (10a), with a nominative subject and with the reflexive marker –sja (ungrammatical) (10b), with a dative subject and the reflexive marker –sja (grammatical) (10c), and with a dative subject and no reflexive marker (ungrammatical) (10d):

10 a. Ya dremala tselyj chas po puti v Middlebury.
I.NOM dozed.F.1SG whole hour on way to Middlebury
‘I dozed a whole hour on the way to Middlebury.’

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7 I thank Jeffrey Steele who kindly allowed me to use his language assessment questionnaire as a sample to the one I used in my study.
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b. *Ya dremalos’ po doroge v Middlebury.
   I.NOM dozed.REFL on way to Middlebury
   Intended meaning: ‘I was dozing on the way to Middlebury.’

c. Mne sladko dremalos’ po puti v Middlebury.
   Me.DAT sweet dozed.REFL on way to Middlebury
   ‘To me dozed sweetly on the way to Middlebury.’

d. *Mne xorosho dremala v mashine po puti v Middlebury.
   Me.DAT good dozed.F.3SG in car on the way to Middlebury
   Intended meaning: ‘I dozed well on the way to Middlebury.’

Essentially, the GJ task establishes whether learners have a solid knowledge of the morphosyntactic properties of dative subjects and the reflexive marker –sja in Russian. Having established this factor of the L2 grammar, subjects then were asked to perform the main task of the study – the semantic decision task.

4.2.2 Semantic Decision Task

The Semantic Decision Task used in this study was based on stories. This task is similar to truth-value judgment tasks used in such L2 acquisition studies as Bruhn de Garavito (2000), Slabakova & Montrul (2000) and others. The task evaluated learners’ sensitivity to the differences between dative and nominative subjects’ semantics and their respective interpretations in specific contexts. As far as Russian is concerned, the contextual differences between the [+control] nominative and the [-control] dative are truly subtle.

The task consisted of short stories arranged in a five-point scale ranging from ‘doesn’t sound right/does not correspond to/reflect the story’ (-2) to ‘sounds very good/perfectly corresponds to/reflects the story’ (+2). The materials of the test, including instructions, were written entirely in Russian. Thirty-two story-sentence combinations were presented for judgment such that the subjects had to give their first impression of the sentence appropriateness to the story.

Four class I psych verbs (want, hear, woo/conquer, dream) and four activity verbs (work, sleep, read, walk) were tested in this study. Each verb appeared in four different conditions: 1) without –sja in [+control] context with nominative subject (√) (11); 2) with –sja in [-control] context with dative subject (√) (12); 3) with –sja in [+control] context with dative subject (*) (13); and 4) without –sja in [-control] context with nominative subject (*) (14).

Condition 1: Control context + nominative subject = √
This year my niece went to a private school. She finds it really difficult to study there. Today she will have her first exam on biology and so she studied the whole day yesterday preparing for it. But she wanted to be even more prepared and so she studied all night long without any sleep.

(11) V etu noch’ moya pleyannica ne spala. -2 -1 0 1 2
   In this night my niece.NOM not slept.F.3SG
   ‘My niece didn’t sleep last night.’

Condition 2: -Control context + dative subject = √
Maxim is a first-year student in a prestigious university. He finds it really hard to study there. Today he will meet two professors for the first time and will report his research. Last night Maxim studied really hard; he even learned his report by heart. But he was so anxious that he was not able to fall asleep even though he felt very tired.
V etu noch’ Maksimu ne spalos’.

‘Maxim {couldn’t sleep / didn’t feel like sleeping} last night.’

**Condition 3: Control context + dative subject = * **

My research paper is due in a week. I am a slow worker and so now I have to work even during the night. For the last three nights I had to work without any sleep.

Mne ne spalos’ tri nochi podryad.

‘I {couldn’t sleep / didn’t feel like sleeping} three nights in a row.’

**Condition 4: -Control context + nominative subject = * **

My friend Galya called me yesterday and told me very exciting news – she took three days off and so she doesn’t have to wake up early in the morning. Galya spent the whole day outside and she was very tired when returned home at night. But for some reason she couldn’t sleep all night.

Gal\ya ne spala vsju noch’.

‘Galya didn’t sleep the whole night.’

Overall, the 32 story-sentence combinations were distributed over the following conditions/contexts: 16 story-sentence combinations with psychological verbs crossing [+control] and [-control] contexts with nominative and dative subjects, and another 16 doing the same with activity verbs. Thus, each verb appeared a) two times in agreement with nominative subjects and two times with dative subjects, and b) in two appropriate and two inappropriate contexts for a total of four times. The sample of story-sentence combinations is exemplified above for the activity verb *sleep* (the target answer is highlighted). The 32 sentences were randomized to avoid a bias/recognition effect.

4.3 Results

4.3.1 Grammaticality Judgment Task

Recall that the grammaticality judgment task served as a pretest to the main task and tested L2 learners’ knowledge of the cooccurrence of dative subjects with reflexive morphology on a verb, and, conversely, the disallowance of cooccurrence of nominative subjects with the reflexive –sja on a verb. The results were analyzed separately according to verb type.

Figure 1 shows the mean responses for psychological verbs and Figure 2 shows the mean responses for activity verbs for the grammaticality judgment task. Responses for the ungrammatical ‘*’ dative and nominative are correct if approximating -2; responses for the grammatical ‘√’ dative and nominative are correct if approximating 2. This scaling holds throughout both tests.
Figure 1. Grammaticality Judgment Task: mean responses for Psych verbs

Figure 2. Grammaticality Judgment Task: mean responses for Activity verbs

Figure 1 shows that overall all of the groups are able to correctly judge the (un)grammaticality of datives with and without reflexive –sja with the psych verbs in the constructions studied in this paper. The means also indicate that, overall, the judgments of the L2-advanced group are less accurate than those of L2 high-advanced and native speaker groups. This pattern is also observed with activity verbs (Figure 2). However, here L2-advanced are even less accurate. This is especially so in their acceptance of grammatical “√” datives (mean responses for activity verbs: advanced 0.0, high-advanced .75, natives 1.1). This result suggests that the lower proficiency L2 group does not treat datives with activity verbs as acceptable as with psych verbs (mean responses for psych verbs: advanced 0.34, high-advanced .75, natives 1.13). To compare this performance in absolute terms, statistical analysis was carried out.

Mean scores were submitted to a factorial ANOVA with repeated measures, with group (control, high advanced, and advanced) as a between-subject factor and verb (psych, activity), case
(dative, nominative), and response (grammatical, ungrammatical) as within-subject factors. Overall results showed significant main effects for case $F(1.22)=21.075$, $p=.000$, response $F(1.22)=150.260$, $p=.000$, case x group interaction $F(1.22)=3.883$, $p=.038$, response x group interaction $F(1.22)=4.710$, $p=.021$, and verb x case x group interaction $F(1.22)=2.608$, $p=.099$. The main effect for verb type was not significant ($p=.853$).\(^8\)

The following main effects were found to be significant for the two L2 groups: case $F(1.12)=11.608$, $p=.006$, response $F(1.12)=59.765$, $p=.000$, case x group interaction $F(1.12)=6.088$, $p=.031$, response x group F(1.12)=3.216, $p=.100$, and verb x case x group interaction F(1.12)=3.040, $p=.109$.

For the L2 advanced group only case F(1,4) = 14.172, $p=.020$ and response F(1,4) = 11.311, $p=.028$ factors were found significant as main effects. No interactions were found significant. The L2 high-advanced group’s results showed main effects for response $F(1,7)= 69.540$, $p=.000$, and verb x case interaction $F(1,7)= 3.615$, $p=.099$.

For the native speakers there was a significant main effect for verb $F(1.9)=6.259$, $p=.034$, case $F(1.9)=9.658$, $p=.013$, response $F(1.9)=128.847$, $p=.000$, and for the interactions case x response $F(1.9)=5.038$, $p=.051$ and case x verb x response $F(1.9)=3.092$, $p=.113$ (marginal).

A post hoc independent t-test revealed a difference in the performance on ungrammatical datives with psych verbs between the native speakers (NS) and L2 advanced groups ($t=2.238$, $p=.047$), but not between the NS and L2 high-advanced groups, or between the two L2 groups. Ungrammatical nominatives with psych verbs also showed a marginally significant difference between the NS and L2 advanced groups ($t=1.713$, $p=.110$), but not between the NS and L2 high-advanced groups.

T-tests also showed the difference between the NSs and L2 advanced groups on grammatical datives with activity verbs ($t=-2.193$, $p=.047$), but not between NSs and the L2 high-advanced group or between the two L2 groups. There was no difference between the groups in correctly ruling out ungrammatical datives with activity verbs.

An independent t-test also showed that the L2 advanced group was significantly different from both NSs ($t=1.867$, $p=.085$) and the L2 high-advanced group ($t=2.570$, $p=.026$) in ruling out ungrammatical nominatives with activity verbs.

The results obtained with the L2 advanced group characterize it as a ‘simple’ group as the main effects were only for the factors, and no interactions. The other L2 group is more ‘sophisticated’, or learned, as interactions were found. I now turn to the semantic decision test to see whether this pattern also holds true for this task.

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\(^8\) The observed sample (n=13) in this study does not appear to be powerful enough. Therefore the level of significance is set up liberally. For current purposes, results are interpreted as significant at $p=.10$, and as marginally significant at $p=.15$. I am aware of the possibility of false interpretations, but hope to collect a bigger sample to obtain significant results.
4.3.2 Semantic Decision Task

The Semantic Decision task was the main test in this study. The purpose of the semantic task was to find out whether an L2 learner is sensitive to the occurrence of dative subjects in contexts where the dative is an experiencer lacking control over the situation/event described by the verb.9

Figure 3 shows mean responses for each of the groups for psych verbs and Figure 4 shows mean responses for each of the groups for activity verbs. The responses in the Semantic Decision test are not as clear-cut as in the GJT, but there is an identifiable pattern for each verb type. Nominative subjects are treated by all groups in a similar way and are not excluded (which is an unexpected result) from infelicitous (*) contexts (shown by the right most columns in Figure 3 and 4). Mean responses on the infelicitous nominative subjects in the [-control] contexts were as follows. Psych verbs: advanced 0.74, high-advanced 1.038, natives 0.86. Activity verbs: advanced 0.66, high-advanced 0.913, natives 1.02. Felicitous √ nominative subjects were correctly accepted by all three groups. The high-advanced group scored higher than the L2 advanced group for both types of verbs.

Figure 3. Semantic Decision Task: mean responses for Psych verbs

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9 The item with the psych verb ‘dream’ with the nominative subject in the [-control] context was excluded from the analysis at the overall mean score 1.8 (vs. -2 ‘not felicitous’ for the native speakers). Mechtat’ ‘dream’ is a verb with a highly abstract lexical meaning (like seem, etc.), which may result in conflation between the [-control] dative and [+control] nominative. Ultimately, the choice of the item for the semantic test may have been infelicitous. Another item with the activity verb ‘read’ with the nominative subject in the [-control] context was excluded from the analysis as well. Native speakers ruled out the sentence, with an overall mean score of 1.5 (vs. -2). The story to this particular sentence was falsely structured, such that the sentence sounded as if it were affirming one of the events described in the story and so the sentence was thus incorrectly accepted.
Responses on dative subjects were not uniform. With activity verbs (Figure 4), infelicitous datives are, as expected, ruled out in [+control] contexts by the native (-0.94) and L2-advanced (-0.82) groups, but not by the L2 high-advanced group (0.04). As for the felicitous datives in [-control] contexts, all groups correctly accepted them (mean responses: advanced 0.8, high-advanced 1.28, natives 0.98).

Dative subjects with psych verbs (Figure 3) appear to be trickier. Again, felicitous datives in [-control] contexts were correctly accepted by the native (0.94) and high-advanced (0.81) groups, but not by the advanced L2 group (-0.6). This latter result is surprising in light of results for activity verbs. Infelicitous datives were unexpectedly accepted by the native (0.54) and high-advanced (0.46) groups, and were ruled out by the advanced L2 group (-0.34).

What is important here is that despite the fact that the L2 advanced learners correctly ruled out infelicitous datives with activity and psych verbs, they also incorrectly ruled out felicitous datives with psych verbs. The only condition where the L2 advanced group accepted dative subjects was with the activity verbs in the [-control] context. This result will be addressed in the discussion section.

Scores were submitted to a factorial ANOVA with repeated measures, with group (natives, high advanced, and advanced) as a between-subject factor and verb (psych, activity), case (dative, nominative), and response (felicitous, infelicitous) as within-subject factors. Overall results showed significant main effects for case F(1.22) = 32.829, p=.000, response F(1.22) = 25.059, p=.000, verb x response interaction F(1.22) = 9.422, p=.006, case x response interaction F(1.22) = 4.186, p=.054, verb x case x group interaction F(1.22) = 4.847, p=.019, and verb x case x response interaction F(1.22) = 18.657, p=.000. The main effect for verb type was not significant p=.261.

In order to see which two-way interaction is producing the effect for the three-way verb x case x response interaction (which came out highly significant p=.000), the following three sub-interactions 1) verb x case, 2) verb x response, and 3) case x response, were further analyzed for each of the three groups. The last two showed significance in the main analysis, so it was expected that the two interactions would provide an answer for the three-way interaction.

To interpret the two-way interactions, post hoc paired-samples t-tests were run. They showed the following for the verb x response interaction. For the L2 advanced group there was a significant effect (t=4.966, p=.008) on felicitous vs. infelicitous datives with activity verbs and on infelicitous
datives with psych vs. with activity verbs (t=3.925, p=.003); the control group showed a significant difference with respect to felicitous and infelicitous datives with activity verbs (t=4.589, p=.001), and also for felicitous and infelicitous nominative subjects with psych verbs (t=3.762, p=.004). There was no effect for the L2 high-advanced group on the interactions.

For the case x response interaction, paired-samples t-tests showed the following. Only the control group showed a difference in treating felicitous and infelicitous nominatives with psych verbs (t=3.762, p=.004). Infelicitous datives and nominatives with activity verbs were treated significantly different by the control group only (t=-5.192, p=.001). Felicitous vs. infelicitous datives with activity verbs showed significance for the control (t=4.589, p=.001) and L2 advanced (t=4.966, p=.008) groups.

The second significant three-way interaction effect in the semantic decision task was verb x case x group. In this three-way interaction none of the two-way interactions were significant in the main analysis and thus only one sub-interaction verb x case was analyzed for each of the groups to identify where (for what group) the effect was being produced. ANOVAs were run for each of the groups.

The interaction in question did not obtain with the L2 high-advanced group, but with the NS and L2 advanced groups.

A paired-samples t-test revealed a significant difference between felicitous datives and nominatives with psych verbs (t=-4.672, p=.000). An independent t-test pointed to the fact that this difference is due to the L2 advanced group, which differed from the other two groups in rejecting datives.

Paired-samples t-tests showed significant differences for infelicitous datives with psych and activity verbs (t=3.827, p=.001). Native speakers’ judgments differed from the L2 advanced group, but not from the L2 high-advanced group, as revealed by a post hoc Bonferroni test.

Overall, all groups treated felicitous and infelicitous datives with activity verbs significantly differently (paired samples t-tests results: L2 advanced t=4.966, p=.008; L2 high-advanced t=2.156, p=.068; NS t=4.589, p=.001), but there was no significant effect for any of the groups for nominatives with activity verbs.

An independent samples t-test showed no significant difference between the L2 high-advanced and native speaker groups on any of the conditions, with the exception of infelicitous datives with the activity verbs, but even then the level of significance was marginal (t=1.736, p=.102). Interpretation and discussion of the results follows in the next section.

5. Discussion and Conclusions

The Grammaticality Judgment task was designed to test L2 learners’ knowledge of the cooccurrence of dative subjects with the reflexive –sja on a verb. Both L2 groups performed less accurate than the native speakers. Advanced L2 speakers dramatically differed from NSs in that they did not accept dative subjects with activity verbs. At the same time, these speakers correctly accepted datives with psych verbs and thus showed no significant deviation from the control group.

This is to be expected if we assume that the learner is going through an acquisition process involving expansion of the L1 experiencer inventory, as follows: the L1 grammar has nominative experiencers with psych verbs (class I of B&R), but no dative experiencers with the same verbs. Once the dative case and the reflexive morpheme are internalized, the learner is ready to extend from the L1 grammar and include dative experiencers in the L2 grammar. Up to this point, this scenario can be explained by the Full Access/Full Transfer hypothesis (Schwartz & Sprouse 1996, White 1989, etc.). Recall that according to this hypothesis, the UG operates via L1 but is not restricted to L1. The initial state of L2 learners is their L1 grammar, which in the process of acquisition is being restructured in virtue of L2 input interacting with UG. Here, however, this reanalysis did not meet the
requirements for activity verbs with dative subjects in the L2 grammar. One possible explanation is that these learners are still en route to acquiring constructions with activity verbs. This is evidenced by the random acceptance of the constructions (mean score 0.0).

The lack of ‘confidence’ in rejecting ungrammatical datives with psych verbs was also found to be significant for the L2 advanced group. The fact that ungrammatical nominatives with psych and activity verbs were also judged poorly suggests an incomplete acquisition. This argument is conceivable for this study since there is a second group of L2 learners whose performance is fairly similar to the native speakers on at least the grammaticality judgment test. I now turn to the main task of this study.

The Semantic Decision task was intended to test the presence or absence of intuitions of L2 learners with regard to the semantics of dative impersonal constructions in Russian. Dative experiencers are felicitous only in contexts where they lack control over the state or event described by the verb.

Impersonal constructions with psychological verbs revealed an intriguing response pattern for the L2 advanced group. These speakers rejected felicitous dative subjects in the [-control] contexts, but no other group did. Such a result is unexpected, especially since it is contrary to the one obtained in the GJ task (Figure 1 above), where datives were correctly accepted (although with a relatively low mean score). In the next condition, datives were correctly rejected from [+control] contexts by the L2 advanced group, but not by the L2 high-advanced and NSs groups. In [+/-control] conditions with nominative subjects, lower proficiency speakers performed in a comparable way to the other two groups. However, they performed significantly worse than the native speakers and L2 high-advanced group in accepting felicitous nominatives with psych verbs. The lower proficiency L2 group performed considerably differently from the NS group on three out of four conditions with psych verbs (results from infelicitous nominatives in [-control] contexts did not show significance between the three groups), and considerably different from the higher proficiency L2 group on two conditions – with felicitous dative and nominatives with psych verbs.

To conclude about this group of learners, L2 advanced speakers do not appear to be sensitive to the subtle semantics of Russian impersonal constructions. In those constructions where learners appear to exhibit the presence of subtle semantic knowledge we seem to observe a pattern of random guesses. The prediction, articulated in §2.5, for the L2 advanced learners are borne out by the results: the L2 learner, at initial stages of learning, will transfer all functional categories but not their specifications from the L1, so functional features will have no values until the learner acquires particular values in the target grammar, or until the learner’s knowledge matures (Eubank’s (1994, 1996) Valueless Features hypothesis). The L2 advanced learners seem to follow this pattern of acquisition, but they have not (yet) valued the functional head Appl0 responsible for the subtle interpretation of the dative experiencer.

The higher proficiency L2 learners, on the whole, performed insignificantly different from the native speakers. The only condition where the answers were different was with infelicitous datives with activity verbs. But even then the responses for this group were revealed to be significantly different from the responses for felicitous datives. This, in turn, indicates that high-advanced L2 learners do perceive the semantic difference between the two contexts, just like the native speakers, although less robustly so. One way to think of this discrepancy is that these speakers are, in fact, being consistent in showing their sensitivity to the subtle semantics of impersonals with datives. However, this sensitivity is blurred with activity verbs, the primary lexical function of which is not that of a predicate of experiencer arguments.

One important result revealed by the paired samples t-test is that only native speakers treated felicitous nominatives with psych verbs significantly different from infelicitous ones (Figure 3). This finding suggests that while native speakers are sensitive to the incompatibility of nominative experiencers in [-control] contexts, this does not seem to be the case for non-native speakers. As was
mentioned earlier, the constructions under investigation are quite subtle and, according to the native
speakers, are difficult to treat on a rigid -2 to 2 scale. The choice between the dative and nominative
subject is motivated by very delicate contextual clues such as agentive adverbs for the nominative, or
avoidance of the [+control] context/person by the choice of non-agentive adverbs.

The Partial Access to UG view seems to be the best candidate for explaining the acquisition
pattern observed here. As was mentioned above, the L2 advanced learners’ acquisition seems to grant
support to Eubank’s Valueless Feature approach, where functional features are valued when the
learner’s knowledge matures. The L2 high-advanced learners’ results on the acquisition of Russian
impersonals do not seem to lend direct support to either Eubank’s Valueless Feature approach (as
these learners are no longer at the initial stage of L2 acquisition) or Beck’s Local Impairment
Hypothesis, which states that the features of functional categories are impaired in L2 acquisition
because the feature strength is permanently inert in the learners’ grammatical representation. The
latter hypothesis also predicts that optionality (i.e., more than one grammatical system at any stage of
acquisition) will not disappear even at the final stage of L2 acquisition. It could be suggested that
optionality, arguably found in the results of the higher proficiency group, is a possible candidate for
explaining these learners’ acquisition.

To conclude, both L2 groups have knowledge of the morphosyntax of impersonal
constructions. However, advanced L2 speakers are not sensitive to the semantic subtleties found with
impersonal constructions in Russian. These learners’ interpretations were significantly different from
the native speakers’ interpretations, especially when involving psychological predicates. The L2
high-advanced speakers exhibited more sophisticated knowledge of the constructions in question. In
general, their overall performance was comparable to the native speakers. Still, there was a difference
between the two groups and the fact that it was not detected by a statistical analysis indicates that
these structures should be tested on a bigger sample whose proficiency level is comparable to that of
the higher proficiency speakers in the present study.

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