VERBAL TRANSITIVITY IN CHILD RUSSIAN: OPTIONAL OBJECT OMISSION STAGE

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Abstract: The present paper examines verbal transitivity development in child Russian within a generative grammar framework. I use an elicited production task to investigate whether Russian-speaking children omit direct objects in perfective strongly transitive contexts. The results of 45 monolingual Russian children aged from 3 to 6 years showed that they optionally omitted direct objects in perfective strongly transitive contexts where adult controls used overt nouns. Russian-speaking children seem to have an optional object omission stage as it has been attested in several typologically different languages. The results also showed that children employed appropriate aspectual and tense morphology, and no correlation has been established between acquisition of verbal aspect and direct object omissions. I hypothesize that the non-adult-like object omissions in strongly transitive contexts in child Russian can be explained by the acquisition of nominal quantificational properties.

1. Introduction

Previous research on verbal transitivity development has shown that young children optionally omit direct objects in obligatory transitive contexts in many languages, such as French, English, Italian, Dutch, German, and Mandarin (Schaeffer 1997; Grüter 2006; Müller et al. 2006; Pérez-Leroux et al. 2008). Experimental studies on child Russian have established that three- to six-year-old Russian-speaking children overproduce null objects compared to adults in optional contexts where object omission is a grammatical possibility (Mykhaylyk et al. 2013; Frolova 2015). However, object production in strongly transitive contexts in child Russian has not been examined. A comparison of object uses in strongly transitive contexts in children and adults could help identify areas that are developing during the acquisition of transitivity in child language.

The main research question of the present study is whether Russian-speaking children omit direct objects in strongly transitive contexts where overt realization of objects is required due to the syntactic structure of the predicate, as in (1):

(1) Čto   ty   sdelal?
   what you_{NOM} did_{PF PAST}[1]?
   'What did you do?'
   Ja   postroil   zamok.
   I_{NOM} built_{PF PAST} castle_{ACC}
   'I built a castle.'

The paper starts by discussing verbal transitivity and telicity within a generative grammar framework and defines strongly transitive contexts in adult Russian. Section 3 examines previous findings on verbal aspect and transitivity in L1 acquisition. Section 4 presents an experimental study on direct object realization in strongly transitive contexts in Russian L1. The final section evaluates the results and makes assumptions for future research on verbal transitivity development in L1.

2. Transitivity in adult Russian

In adult Russian, overt realization of direct objects is optional in the majority of contexts (Gundel 1980; Miller and Weinert 1998; McShane 2005; Tipkova 2014; Frolova 2015). Following syntactic approaches to verbal transitivity, an omitted object has a syntactic place in the sentence structure, and it can be analyzed as a null noun 'N' or a null pronoun '*pro*' (Roberge 2007; Landau 2010; Sigurðsson 2011).

In Russian, uses of the non-referential null object are restricted by verbal aspect; in particular, the generic N is not normally used with perfective verbs.[2] The generic N is a null noun that is not identified by agreement morphology. It has existential or generic interpretation and is analyzed as a cognate null noun whose interpretation is given by verbal semantics (Massam 1990; Hale and Keyser 2002; Kayne 2002; Roberge 2007). In Russian as in English, N can appear with activity verbs, for example *to write, to read, to draw, to eat* and *to drink*. Dictionaries often classify these verbs as optionally transitive because they can be used without an overtly realized object.

(2)   U   nego   osobyj   talant   očarovyvat' _.
       at   him_{GEN}   particular_{ADJ ACC} talent_{ACC}   to charm_{IMP} Ø_{ACC}
       'He has a particular talent to charm.'   (McShane 2005: 118)

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[1] List of abbreviations: ACC – accusative case; ADJ – adjective; ASPQ – aspectual projection where Q means quantity; DAT – dative case; DEL – delimitative perfective aspect; e – event; FUT – future tense; GEN – genitive case; IMP – imperfective aspect; IMP2 – secondary imperfective aspect; INC – inchoative perfective aspect; NOM – nominative case; Q – quantity; PAST – past tense; PF – perfective aspect; RI – root infinitive; TERM – terminative perfective aspect.

[2] This generalisation has a few exceptions where N has a stereotypical interpretation:

   Ja   tebe   napišu   _.
   I_{NOM}   you_{DAT}   write _{PF FUT}   Ø_{<letter or email>}
   'I'll write you.'

Thus, in (2), the direct object of the verb *očarovyvat'* 'to charm' is not realized overtly; it has a generic interpretation of 'somebody who can be charmed'.

Russian verbs are used in one of the two aspectual forms: imperfective or perfective. There are different types of imperfective and perfective verbs, and the aspectual value of a verb can be derived in several steps during the syntactic derivation (Borik 2002; Svenonius 2004; Borer 2005; Romanova 2006). In the following example, the verb *čitat'* 'to read' (3a) is imperfective, morphologically simple and contains a verbal radical and an ending; in (3b), the perfective prefix *pro-* is added to the imperfective form, and this derivation changes the imperfective aspectual value to perfective:

(3)   a.   Čitat'   knigu.
          to read$_{IMP}$ book$_{ACC}$
          'To read a book.'
      b.   **Pro**čitat'   knigu.
          to read$_{PF}$ book$_{ACC}$
          'To read a book completely.'

The perfective markers in Russian have a double function: they mark semantic aspect, telicity, and grammatical aspect, perfectivity (Borer 2005; Bertinetto and Lentovskaya 2012). Semantic aspect distinguishes the aspectual value of telic and atelic events. A telic event has an inherent endpoint or a boundary, while an atelic event does not have such an endpoint. Borer (2005) describes a telic event as a non-homogeneous activity that may not be entirely completed but presupposes a change, as opposed to a homogeneous atelic event. In languages such as English, the telic value of optionally transitive activity verbs (e.g. *to eat, to read, to draw*) is determined compositionally in the sentence structure (e.g. the telic predicate requires an overt object) and depends on the quantificational properties of the object. A telic interpretation is obtained when a quantified object (following Borer's 2005 terminology) completes the meaning of the activity verb. In English, direct objects of activity verbs are optional inside an atelic predicate, but they have to be overtly realized to express telicity (Massam 1990; Olsen and Resnik 1997), as illustrated in (4):

(4)   a.   John ate (an apple) for 5 minutes[3].   (atelic, object is optional)
      b.   John ate (apples) for 5 minutes.   (atelic, object is optional)
      c.   John ate three apples in 5 minutes.   (telic, object is required)
      d.   *John ate Ø$_{ACC}$ in 5 minutes.   (if telic, object cannot be omitted)

Differently from English, telicity in Russian is marked morphologically on the verb by aspectual markers[4]. This paper is focussed on telic predicates containing perfective

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[3] The adverbial expressions *in x time* vs. *for x time* are commonly used to determine the aspectual value of an event. For example, if the sentence remains grammatical with the expression *in x time*, this sentence has a telic interpretation, as in (4c).

[4] With the exception of a small number of bi-aspectual verbs, such as *annulirovat'* 'to cancel'. These verbs are loanwords in Russian, and their aspectual value is determined in a sentence structure.

resultative verbs because these contexts are strongly transitive in Russian. When a direct object of a perfective resultative verb is used without an antecedent or an extra-linguistic referent, this object is realized as an overt noun (cf. example 5). *Resultative* means that a telic predicate expresses a result of a given activity. I adopt the representation in Figure 1 for telic predicates in adult Russian. The telic predicate has an aspectual projection AspQ (Q means quantity, AspQ is adopted from Borer 2005). AspQ quantifies the homogeneous atelic event into a non-homogeneous telic event (Borer 2005). Differently from Borer (2005)'s analyses, the representation in Figure 1 have a *v*P projection; I assume that object case is licensed by *v* (Richardson 2003). To account for the uses of generic N, I suppose that the object is merged at the VP level (Roberge 2007). The object moves from its original position in VP to SpecAspQ to agree in quantity with the perfective verb and to verify its case feature. The generic N is not compatible with the telic predicate because it cannot be quantified (e.g. obtain an individuated interpretation, see Olsen and Resnik 1997). The telic structure in Figure 1 is strongly transitive and requires an overt realization of direct objet. Following Borer (2005), AspQ is not projected inside an atelic predicate. In Russian, an atelic predicate is compatible with all types of objects, e.g. lexical, pronominal or null.
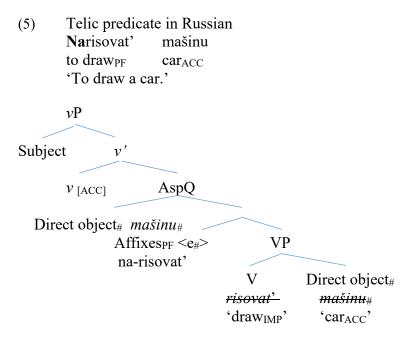
(5)   Telic predicate in Russian
        Narisovat'   mašinu
        to draw$_{PF}$ car$_{ACC}$
        'To draw a car.'

Figure 1. Telic predicate in Russian

3. Verbal transitivity and aspect in child Russian

Previous research on child Russian has shown that children omit direct objects more frequently than adults. Gordishevsky and Avrutin (2004) attribute null objects in spontaneous production of two-year-old Russian-speaking children to the development of pragmatics (6). They suggest that very young children tend to establish a reference of an omitted object via a direct link to an object in the discourse and ignore the presence or absence of an antecedent in the linguistic context:

(6) Child: _   daj   _.   (1;10.20)
            $\emptyset_{NOM}$ give$_{IMPERATIVE}$ $\emptyset_{ACC}$
            'Give.'

     Adult: Čto   daj?
            what$_{ACC}$ give$_{IMPERATIVE}$
            'Give what?'

                                                    (Gordishevsky and Avrutin 2004: 7)

Mykhaylyk et al. (2013) suggest that four- to six-year-old Russian-speaking children already differentiate new as opposed to old information, and that, although at the age of 4 and after they still omit objects at higher rates than adults, they do so in pragmatically felicitous contexts:

> It is possible, however, that in an experimental setting, the adults (especially Russian speakers) tried to be as informative as possible and avoided omissions in general. The children, on the other hand, produced short utterances with only as much information as needed, preferring subject and object omissions.
>
> (Mykhaylyk et al. 2013: 22)

Frolova (2015) also reports higher rates of omissions in optionally transitive contexts in Russian-speaking children than in adults. In her replication of Pérez-Leroux et al. (2008), three- to five-year-old children omitted objects twice more frequently than adults in referential and non-referential contexts; children appropriately selected types of direct object in referential (e.g. pronouns) and non-referential contexts (overt nouns). Frolova's (2015) conclusions are in line with Pérez-Leroux et al. (2008) hypothesis that the optional object omission stage in L1 could be explained by functioning of a universal default null noun N in child grammar. Pérez-Leroux et al. assume that the generic N is a 'common denominator' because this null object exists in many adult grammars. The initial minimal transitive structure includes a verb and a default null noun, N, with unrestricted properties. The unrestricted properties of N in children allow using this default in all transitive contexts, referential and non-referential. During the optional object omission stage, children are predicted to use the default N instead of object clitics in French or the object pronoun *it* in English in referential contexts. The coexistence of the default N with target options of null objects in child grammar should explain optional objects in obligatory transitive contexts cross-linguistically. Children need to refine or restrict their uses of the

default N to the contexts where N is used in the target languages (e.g. non-referential contexts).

To the best of my knowledge, there are no studies on object omissions in telic contexts in Russian L1. In order to explore the possibility that direct object realization in telic contexts could correlate with aspectual development in child Russian, let us consider previous research on the acquisition of verbal aspect.

It has been established that Russian children acquire aspectual morphology early. The perfective aspect is marked on first verbal forms, including root infinitives (RI) (Gvozdev 1961; Pupynin 1998; Brun et al. 1999; Gagarina 2000; Vinnitskaya and Wexler 2001): [5]

(7)   Snjat'   botinočki.   (1;8)
       take off_PF ROOT INFINITIVE   little boots_ACC
       'Take off little boots.' [The child points to the boots that have been taken off.]

                                                                    (Brun et al. 1999: 127)

Researchers suppose that two-year-old children know the essential rules of perfective derivation because they use perfective forms productively and with only a few errors. Imperfective and perfective forms of the same verb are attested in children before age 3. Brun et al. (1999) report only about 3% of erroneous forms in their data of Russian-speaking children aged from 1;5 to 2;4. Young children can omit aspectual markers (8) or create inexistent forms by incorrect association of aspectual prefixes and roots (9):

(8)   Davaj _motrim.   (instead of **pos**motrim)   (2;2)
       let's   see_PF FUT
       'Let's have a look.'
(9)   **Iz**čistit' kartošku.   (instead of **po**čistit')   (2;5)
       peel_PF potato_ACC
       'To peel potatoes.'

                                                                    (Gvozdev 1961: 425-426)

Among several types of perfective verbs, resultatives (also called *telic verbs* in Stoll 1998), such as *narisovat'* 'to draw', are acquired before other verbs, for example, delimitative, such as *porisovat'* 'to draw for a while' (Stoll 1998, 2005; Gavruseva 2007; cf. footnote 6). Three- to five-year-old children seem to interpret all types of perfective verbs as resultative, and they refine perfective typology with development (Gavruseva 2007).

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[5] During the root infinitive stage (RI) children use infinitival forms instead of tensed verbs. The RI stage is attested in very young children before three years cross-linguistically.

Although, children use perfective forms to denote completed activities and imperfective aspect to denote progressive activities, as in (10), experimental studies have shown that children can associate imperfective aspect with completed activities and perfective aspect with progressive activities until 6 years (Stoll 1998; Vinnitskaya and Wexler 2001).

(10) Otojdi, ja otk(r)yvaju vorota. _ otk(r)yla _. (2;4)
move away, I$_{NOM}$ open$_{IMP2}$ gate$_{ACC}$. Ø$_{NOM}$ opened $_{PF}$ Ø$_{ACC}$
'Move away, I'm opening the gate. (I)'ve opened (it).'

(Pupynin 1998:113)

Stoll (1998) reports the following results for adult-like association of perfective resultative verbs with completed events: 75% at the age 3; 83% at the age 4; 91% at 5; and 95% at age 6. The non-adult-like interpretation of aspectual forms has been explained by the acquisition of discursive constraints and tense (Van Hout 2005) and has not been linked to the development of transitivity.

The root infinitive stage has been associated with an incomplete specification of aspect in early child grammar before 3 years (Gavruseva 2003). According to Gavruseva (2003), aspectual development during the RI stage could correlate with the acquisition of nominal quantificational properties and could result in direct object omissions in telic predicates:

> AspP can remain underspecified in child language for some time. I suggest that the underspecified nature of AspP stems from a delay in children's acquisition of the DP/NP semantics and in particular a syntactic property that allows "measure" DPs to trigger the +EM [quantity] specification of the aspectual head. (Gavruseva, 2003: 746)

Gavruseva (2003) speculates that the acquisition of nominal quantificational properties correlates with the end of RI stage: "Until the syntax/semantics of noun phrases is in firm place, non-punctual eventive RIs are predicted to surface with null objects or with DP-less noun phrases (if the predicate is telic)" (Gavruseva, 2003: 751). Gavruseva's analyses do not predict null objects inside telic predicates after the RI stage.

Based on previous research, I propose two hypotheses:

1. Null objects in child Russian are due to the development of pragmatics (Gordishevsky and Avrutin 2004) or an underspecification of aspectual properties during the RI stage (Gavruseva 2003). If this hypothesis is correct, children aged 3 or more should not omit obligatory direct objects representing new information (e.g. non-referential nouns) in tensed telic contexts.

2. If attested after the age of 3, however, optional object omissions in tensed telic non-referential contexts could indicate development in the nominal domain (e.g. the acquisition of null object types). The optional object omission stage could be explained by the functioning of a default null object with underspecified properties (Pérez-Leroux et al. 2008).

With respect to the acquisition of verbal morphology, three- to five-year-old children should not have difficulties in producing resultative perfective verbs (Stoll 1998, 2005; Gavruseva 2007). RIs are not expected to occur after the age of 3 (Gavruseva 2003), and children are predicted to use appropriately tensed verbs. They, however, may employ imperfective forms in perfective resultative contexts because of the acquisition of tense and discursive principles (Stoll 1998; Vinnitskaya and Wexler 2001; Van Hout 2005).

4. Study on obligatory direct objects in Russian L1

To examine direct objects in strongly transitive contexts in child Russian, I employed a standard elicited production task (Pérez-Leroux et al. 2008). Participants were shown picture cards illustrating simple activities, such as drawing a car or building a house. Every activity represented a transitive scenario with an agent and an object. The study included 6 test items. The following perfective verbs were used once per condition: *narisovat'* 'to draw', *postroit'* 'to build', *s'est'* 'to eat', *vypit'* 'to drink', *razrezat'* 'to cut', and *udarit'* 'to hit'. Participants saw pictures and heard a question with each picture ('What did X do?'). The object was not mentioned in the prompt. The verb with neutral semantics *sdelat'* 'to do/to make' was used in the past perfective form in the question to elicit the production of target verbs in the perfective form (11). Target responses contained a resultative perfective verb with an overt noun (12c). The study investigated whether participants would omit direct objects in these contexts, as in (12a). The responses were coded as null (12a), pronominal (12b), and lexical (12c) [6]:

(11) Čto malčik sdelal?
what boy$_{NOM}$ did$_{PF\ PAST}$
'What did the boy do?'

(12) a. On narisoval _.
*he$_{NOM}$ drew$_{PF}$ Ø
'He drew.'

b. On narisoval ejo.
he$_{NOM}$ drew$_{PF}$ it$_{ACC}$
'He drew it.'

c. On narisoval mašinu.
he$_{NOM}$ drew$_{PF}$ a car$_{ACC}$
'He drew a car.'

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[6] A group of responses coded as 'Other' were not included in the results presented in Table 1. This category included missing responses, responses without target verbs, and sentences where usage of direct objects was optional (e.g. with primary imperfective verbs (*risovat' mašinu* 'to draw$_{IMP}$ a car$_{ACC}$'); with delimitative (*porisovat' mašinu* 'to draw$_{PF\ DEL}$ a car$_{ACC}$ for a while'), inchoative (*zarisovat' mašinu* 'to start drawing$_{PF\ INC}$ a car$_{ACC}$'), and terminative (*dorisovat' mašinu* 'to finish drawing$_{PF\ TERM}$ a car$_{ACC}$') perfective verbs; referential uses of direct objects (*Vot mašina. On narisoval_* . 'Here is a car. He drew$_{PF}$ Ø$_{ACC.}$').

The study reports on results from forty-five monolingual Russian-speaking children (aged from 2;7 to 6;4). Participants were recruited in a school for typically developing children in Saint Petersburg, Russia. Children were divided into three age groups: 3-year-old group (n = 11; age range: 2;07-3;11; mean = 3;04; *S.D.* = 4.4); 4-year-old group (n = 18; age range: 4;1-4;11; mean = 4;05; *S.D.* = 3.7); 5-year-old group (n = 16; age range: 5;0-6;04; mean = 5;06; *S.D.* = 4.4). Six adult participants served as a control group.

The results showed that children produced direct objects optionally in the perfective contexts where adult controls did not omit objects. All children groups used null objects. The rate of omissions decreased with age. Although, at the age of 5, the number of null objects is lower by half (compared to three- and four-year-olds), there are still 16% of non-target-like omissions. A Shapiro-Wilk test showed that the data is not normally distributed ($p < .05$). The results on proportions of null objects across age groups are statistically significant (Kruskal Wallis; $p = .018$; *df* = 3). Comparisons of groups using a Mann-Whitney test returned statistically significant results between adults and 3-year-olds ($U = 15$; $p = .034$; $r = .5$), adults and 4-year-olds ($U = 15$; $p = .006$; $r = .56$), 4-year-olds and 5-year-olds ($U = 85$; $p = .033$; $r = .34$). No significant difference was established between three- and four-year-old children.

Table 1. Distribution of responses by age group by type of object in perfective non-referential contexts

Group	Null object	Pronoun	Lexical object
Age 3	0.31	0.00	0.69
Age 4	0.34	0.01	0.64
Age 5	0.16	0.03	0.81
Adults	0.00	0.00	1.00

In this study, children employed verbal morphology in a target-like manner. Thus, all verbs in the corpus are tensed. There were no attested cases of non-adult-like uses of perfective markers, for example, omissions of perfective affixes (cf. example 7) or creation of new forms (cf. example 8). Adults did not produce imperfective verbs in these contexts; however, several children of all age groups used 15-20% of imperfective verbs instead of targeted perfective verbs. A Mann-Whitney test established a significant difference between children of all age groups and adults (between adults and 3-year-olds: $U = 12$; $p = .037$; $r = .58$; adults and 4-year-olds: $U = 21$, $p = .027$; $r = .48$; adults and 5-year-olds: $U = 18$; $p = .027$; $r = .53$). The rate of imperfective verbs remains stable across age groups: no differences were established between the groups of children. This overuse of imperfective forms in perfective contexts in child Russian has been previously observed in

Stoll (1998), Vinnitskaya and Wexler (2001), and Van Hout (2005) and is attributed to the acquisition of tense and discourse principles.[7]

Table 2. Distribution of responses by age group by aspectual form of verbs (perfective/imperfective) in perfective contexts

Group	Perfective	Imperfective
Age 3	0.83	0.15
Age 4	0.80	0.20
Age 5	0.85	0.15
Adults	1.00	0.00

To investigate the possibility that the production of imperfective verbs may positively correlate with object omissions, all children were divided into two groups to compare null object rates in participants who used only targeted perfective forms (group 1; n = 24) and participants who used both imperfective and perfective forms (group 2; n = 21) in perfective contexts. An independent samples *t*-test did not show differences in object omissions across these two groups (group 1: mean = .20; *SD* = .28; n = 24; group 2: mean = .35; *SD* = .37; n = 21; 95% CI = -.35, .04 (*t* = -1.64; *p* = .108; *df* = 43; *d* = .46)). No significant differences were established across each children's age group. A Mann-Whitney test returned significant results for adults and 4-year-old children who employed perfective aspect in adult-like manner (*U* = 12; *p* = .025; *r* = .56). These results indicate that children who err in choosing an appropriate aspectual form omit objects at similar rates to children who used only perfective verbs. Four-year-old children who used aspect correctly omitted objects at a rate significantly higher than adults. The results do not support the hypothesis regarding a possible correlation between non-target-like uses of the imperfective aspect in perfective contexts and null object production.

5. Conclusions

The results of this study identified an optional object omission stage in child Russian as it has been attested in several typologically different languages. Russian-speaking children aged 3 to 5 optionally omitted objects in strongly transitive contexts, where adults used overt nouns. Children employed appropriate aspectual morphology, and verbs were tensed in a target-like manner. Although children employed 15-20% of imperfective verbs in

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[7] The answers containing imperfective verbs were excluded from general results on object production (Table 1) because in imperfective contexts (with simple imperfective verbs) direct objects are optional in the target grammar.

perfective contexts, no correlation has been established between acquisition of verbal aspect and null objects in these strongly transitive contexts.

Previous research on transitivity in child Russian that attributed object omissions to pragmatics (Gordishevsky and Avrutin 2004) or acquisition of aspectual properties (Gavruseva 2003) did not predict null objects in children after the age of 3. The children in this study, however, omitted direct objects in strongly transitive perfective contexts. Since the children had acquired verbal morphology and used it in an adult-like manner, object omissions could indicate development in the nominal domain. A different approach is required to account for children's non-adult-like null objects.

The results of this study support the second hypothesis assuming a default null object in L1 (Pérez-Leroux et al. 2008). We can apply Pérez-Leroux et al.'s approach to Russian, even if it is with adjustments. Pérez-Leroux et al. (2008) attribute the optional object omission stage to the acquisition of null object typology in a given language. During this process, children acquire the properties of the referential null object *pro* (if *pro* is available in the target grammar) and restrict default N uses to generic contexts, corresponding to its uses in adult grammar. This approach explains non-adult-like null objects in referential contexts in child French and English; however, Russian-speaking children omitted nouns in non-referential contexts. They almost did not use pronouns in these non-referential contexts (2%), and this suggests that children are sensitive to pragmatic contextual differences (see also Mykhaylyk et al. 2013; Frolova 2015).

Let us follow Pérez-Leroux et al.'s approach and assume that the null default N is used in non-referential contexts instead of non-referential nouns, as in (13):

(13) a.   What did$_{PF}$ the boy do?
        b.   Adult: He drew$_{PF}$ a car$_{ACC}$
        c.   Child: He drew$_{PF}$ Ø $_{'car'}$.

Pérez-Leroux et al.'s hypothesis that the default null noun can have referential readings in child grammar would not account for object omissions in non-referential contexts in child Russian. What are the properties of this default null noun in child Russian? Gavruseva (2003) suggests that during the RI stage children may omit objects from telic predicates due to the acquisition of nominal quantificational properties which are not yet specified in L1 (cf. Section 3). The present study has shown, however, that object omissions in child Russian do not seem to correlate with the RI stage: the optional object omission stage lasts longer (until 5-6 years) than the RI stage (until 2-3 years) and children omit objects in tensed contexts. Differently from Gavruseva (2003), I hypothesize that the acquisition of nominal quantificational properties could be parallel to the optional object omission stage. In other words, Russian-speaking children use the default null object in perfective contexts during the acquisition of quantificational properties of nouns (not referential properties, as suggested in Pérez-Leroux et al. 2008).

To illustrate this assumption, let us consider the example in (14). In adult grammar, the null object N in (14b) has a generic interpretation of 'something eatable' (Massam 1990; Hale and Keyser 2002; Kayne 2002; Roberge 2007; cf. example 2). It seems that children

could interpret the generic N in (14b) not as a generic null noun but rather as a quantified null noun in (14c). In adult grammar, the generic N is not compatible with the structure of a telic predicate because it cannot be quantified (cf. structure in Figure 1). If, in child grammar, the default noun can have a quantified interpretation, then it would allow children to use it in telic predicates. This could predict a similar interpretation of the sentences in (14a) and (14c) in child grammar, but not in adult grammar.

(14) a.   She ate a sandwich.
      b.   Adult: She ate Ø 'something eatable'.
      c.   Child: She ate Ø 'a sandwich'.

Some support for this hypothesis can be found in studies on the interpretation of telic and atelic predicates in child English and Dutch (Van Hout 1998; Wagner 2006). Differently from adults, English- and Dutch-speaking children aged 3 to 5 do not distinguish telic vs. atelic events based on quantificational properties of direct objects.

In Van Hout (1998), English- and Dutch-speaking children aged 3 to 5 differ markedly from adults in their interpretation of predicates (e.g. atelic/telic). Children do not distinguish aspectual value based on properties of a direct object or on its overt realization in a sentence. Thus, in (15a), the direct object is not overtly realized; in (15b), the direct object is a non-quantified mass noun, and in (15c), the direct object has a possessive determiner. Despite different properties of the direct objects, children interpret all the descriptions in (15) as telic or atelic. In an adult interpretation, only (15c) could have a telic reading, and (15a) and (15b) are atelic:

(15) a.   Did the red/white mouse eat? (atelic)
      b.   Did the red/white mouse eat cheese? (atelic)
      c.   Did the red/white mouse eat his cheese? (could be telic or atelic)

(Van Hout 1998: 402)

Wagner (2006) also concluded that English-speaking children aged 3 to 5 do not perfectly differentiate between telic and atelic predicates based on mass-count distinction, as in (16). According to Wagner (2006), children of this age have some sensibility to quantificational properties of the direct objects while determining the type of a predicate; however, this sensibility is weak ($d = .16$). In other words, (16a) and (16b) both can obtain a telic interpretation in children, while only (16a) could be interpreted as telic in adult English-speakers:

(16) a.   The girl drank a glass of juice.
      b.   The girl drank juice.

(Wagner 2006: 59)

A telic reading of predicates without an overt noun (15a) or with a non-quantified mass noun (15b, 16b) can be possible in young children if they interpret by default all types of direct objects (null and overtly realized) as quantified nouns.

Let us return to the examples in (14) to consider this hypothesis. If we assume that children could interpret a null noun in (14b) as a quantified null noun in (14c), this would explain why they could interpret this predicate as telic. I propose that the default N in child grammar could obtain a quantified interpretation during the optional object omission stage, and this quantified interpretation of N would result in non-adult-like object omissions in strongly transitive non-referential contexts in L1. The object omission stage is predicted to correlate with the acquisition of nominal quantification. Future research is needed to verify this hypothesis and to determine what kind of quantificational properties children acquire during the optional object omission stage (Frolova forthcoming).

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