Subject and Object Omissions in Child Russian

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1.   Introduction

In this paper we report the results of a study investigating the phenomenon of subject and direct object omissions in child Russian. While the omissions have been extensively studied in a number of other languages, they all focused on either non-pro-drop languages (e.g. English (Haegeman, 1990; Valian, 1991; Hyams & Wexler, 1993; Rizzi 1994; Hyams, 1996; Matushansky & Wexler, 2002, to mention a few), German and Dutch (de Haan & Tuijnman, 1989; Weverink, 1989; Kraemer, 1993; Hamann, 1995, etc.)) or obligatory pro-drop languages such as Italian (Valian, 1991, among others). Russian in this sense presents a particular interest because the adult system allows for apparent optionality (cf. Gordishevsky & Schaeffer, 2002). For example, unlike Italian, Spanish, etc., the overt subject in (1) does not mean any additional emphasis or stress, and its use does not cause any change in meaning compared to its covert counterpart:

(1)   A: Chto ty sdelal so stulom?
              'What did you do with the chair?'
       B: *e* slomal *e*. /   Ja slomal ego.
               broke-masc   I broke-masc him
              '(I) broke (it).' / 'I broke it.'

As the example in (1) shows, the use of phonologically empty elements in Russian is clearly dependent on the contextual circumstances (which will be discussed in section 2.2.) with no apparent restrictions from the morphosyntax. In particular, Russian has a rich morphological paradigm with full subject-verb agreement in all tenses (except past where no person agreement is present), but no verb-object agreement. Nevertheless, object omission is possible, too, provided certain contextual requirements are satisfied, as e.g. in (1).

The child acquiring such a system faces an intriguing task of figuring out if and when omissions are allowed. Indeed, from the positive evidence, the child receives information that null subjects and objects are allowed, and at the same time that overt subjects and objects are used too. This presents a challenge for a developing system assuming it starts off with a particular setting and then changes it depending on the input. One might expect then that the Russian speaking children will initially use only one of the available options, or, alternatively, that acquisition of such a non-evident system will cause additional delay in language development.

On the basis of longitudinal data from six monolingual Russian-speaking children, we show that children's performance is driven by the same (non-syntactic, non-morphological) factors as exist in adult Russian. Moreover, we argue that Russian-speaking children possess, rather early, a subtle knowledge of both syntactic constraints (such as the correlation between finiteness of verbs and overtness of subjects on the one hand and no such correlation for objects on the other) and discourse constraints. We also show that while the syntactic constraints are observed from early on, the set of discourse constraints is initially extended to include the ones that are incorrect from the adult point of view, due to the lack of a certain pragmatic principle differentiating speaker and hearer knowledge.

2.   Background

2.1   *Adult Russian as a non-pro-drop language*

Unlike pro-drop languages such as Italian and Spanish, Russian allows subject drop from finite clauses only in certain pragmatically motivated contexts, such as answers to WH-questions, which may omit the subject if the referent of that subject is mentioned in the question, as has been illustrated in (1).

Concerning the status of Russian with regard to the Pro-Drop Parameter, a substantial body of research unanimously points to the fact that Russian is a non-pro-drop language in that, similarly to other canonically non-pro-drop languages, it normally disallows its non-emphatic referential subjects to be null (Franks, 1995; Lindseth and Franks, 1996; Avrutin and Rohrbacher, 1997). Compare, for example, the Russian and English sentences in (2a and b) with their Italian equivalent in (2c):

(2)   (a)   Vchera   *(ja) xodil   v shkolu.
           yesterday   I   went-masc to school
           'Yesterday I went to school.'

       (b)   Yesterday *(I) went to school.

       (c)   Ieri   (io)   sono andato a scuola
           yesterday (I)   am   gone   to school
           'Yesterday (I) went to school.'

The examples in (2) show that Italian, which is a pro-drop language, allows subject drop in non-emphatic non-pragmatically motivated contexts, while Russian and English, which are non-pro-drop languages, do not allow subject drop under such conditions. Again, in Russian the subject can be omitted only when certain pragmatic conditions are satisfied (to be expanded on in section 2.2).

Similarly to subjects, direct objects can also be omitted only in pragmatically motivated contexts, such as answers to WH-questions as in (1), with the referent of

the omitted object mentioned in the question. Like in the case of subjects, Russian disallows object drop in non-emphatic non-pragmatically motivated contexts. Thus, speaker B's utterance in (1) would be ungrammatical if uttered without the preceding speaker A's question, as illustrated in (3):

(3)   *ya/*e* slomal *e*.
          broke-masc
        '(I) broke (it).'

Person agreement on the verb does not improve the situation either in the case of the subject (which must agree with the verb in Russian), or in the case of the object (for which there exists no agreement with the verb in Russian), as is shown in (4):

(4)   **e* lomaju *e*.
          break-1sg
        '(I)'m breaking (it).'

This presents further evidence for the postulation that Russian is a non-pro-drop language in the canonical sense, as in this language, differently from pro-drop languages, verbal agreement does not license null subjects (and, obviously, objects). To illustrate this point further, the examples in (3) and (4) should be compared to their counterparts in Hebrew, a partially pro-drop language, where person agreement on the verb plays a crucial role in licensing subject drop:

(5)   (a)   **e* slomal stul.   vs.   (b)   *e* shavarti kise.
                  broke-masc chair   broke-1sg chair
                '(I) broke a chair.'   '(I) broke a chair.'

       (c)   **e* lomaju stul.   vs.   (d)   **e* shover kise.
                  break-1sg chair   break-masc chair
                '(I)'m breaking a chair.'   '(I)'m breaking a chair.'

The contrasting examples in (5a-d) uncover the following picture. While in Russian the form of the verbal agreement does not influence the licensing of null subjects

(5a,c), in Hebrew subject drop is licensed exactly in those tenses where person agreement is present on the verb (5b), but is not licensed when no person agreement is observed (5d).

Once it is obvious that Russian is a non-pro-drop language and its null subjects (and objects) are not driven by any morpho-syntactic factors, we face the intriguing task of determining the factors that nevertheless allow subject and object omission in adult Russian.

2.2   *Contextual Requirements for Subject and Object Omission in Adult Russian*

Despite the fact that Russian is a non-pro-drop language in parametric terms, it nevertheless allows the omission of many referential subjects and direct objects in main finite clauses, provided certain contextual requirements are satisfied, as outlined in Gordishevsky and Schaeffer (2002). Regarding this phenomenon, Franks (1995) observes that in Russian "items recoverable from the context are frequently omitted on the surface" (1995:307). So, what are these contextual requirements? On the basis of data from adult Russian we argue that empty arguments must be contextually bound, that is subjects and direct objects in Russian can be empty if their referents are recoverable from the linguistic and sometimes situational context, i.e. represent old information or are in the center of discourse/of interlocutor's attention (using the terminology of the centering framework, as outlined in Grosz et al. (1986, 1995)). Consider the following examples from adult Russian.

(6)   Linguistic antecedent – subject

    (a)   A: Gde **Ivan**?
              'Where is Ivan?'
         B: *e* ushel domoj.
               went-masc home
             '(He) went home.

(b)   A: Chto sluchilos' s **Borisom**?
                 'What happened to Boris?'
           B: *e* upal s lestnicy.
                  fell-masc from stairs
                 '(He) fell from the stairs.'

(c)   A: **Mashina** priexala.
                 'A car arrived.'
           B: Chto *e* privezla?
                 what   brought-fem
                 'What did (it) bring?'

(7)   Linguistic antecedent – object

(a)   A: Xochesh **jabloko**?
                 want-2sg apple
                 'Do (you) want an apple?'
           B: Xochu *e*.
                 want-1sg
                 'Yes, (I) want (it).'

(b)   A: Xochu **banan**.
                 want-1sg banana
                 '(I) want a banana.'
           B: Idi voz'mi *e*.
                 go take
                 'Go take (it).'

(c)   A: Kto smotrel **etot film**?
                 'Who saw this movie.'
            B: Ja smotrela *e*.
                 'I saw (it).'

(8)   Situational antecedent: interlocutors (1st & 2nd person) – subject

(a)   *e* xochu jabloko. / *e* xochesh jabloko?
        want-1sg apple /   want-2sg apple
        '(I) want an apple.' / 'Do (you) want an apple?'

(b)   *e* ne znaju chto delat'. / *e* ne znajesh chto delat'?
        not know-1sg what do-inf / not know-2sg what do-inf
        '(I) don't know what to do.' / 'Do (you) know what to do?'

(c)   zavtra   subbota.
        tomorrow Saturday.
        'Tomorrow it's Saturday.'
        e prosplju   ves' den'!
         will-sleep-1sg whole day
        '(I) will sleep all day!'

(d)   *e* (ne) pomozhesh/pomozhete mne s   etim proektom?
        (not) will-help-2sg/pl   me with this project
        'Will/won't (you) help me with this project?'

(e)   nikuda   *e* ne pojdjosh/pojdjote!
        nowhere   not will-go-2sg/pl
        '(You) won't go anywhere!'

(9)   Situational antecedent: interlocutor (2nd person) – object

(a)   Idi suda, poceluju *e*.
        'Come here, (I) will kiss (you).'

(b)   Ne podxodi, a to udarju *e*.
        'Don't come close, because (I) will hit (you).'

(10)   Situational antecedent (3rd person) – subject

(a)   %something falls, everybody looks
        Oj, *e* upalo.
        'Oh, (it) fell.'

(b)   %fixing something
        Chert, opjat' *e* slomalsja.
        'Damn, (it) broke again.'

(c)   %trying to close something
        Nikak *e* ne zakryvajetsja.
        'No way, (it) doesn't close.'

(11)   Situational antecedent (3rd person) – object

(a)   %something falls, someone wants to get it
        Ne vstavaj, ja podnimu *e*.
        'Don't get up. I'll get (it).'

(b)   %giving something to someone
        (Na) poderzhi *e*. / Idi vybros' *e*.
        '(Here) hold (it).' / 'Go to throw (it) away.'

(c)   %pointing at something /someone
        Videli *e*?!
        'Did (you) see (it/him/them)?!'

The examples in (6)-(11) above illustrate all possible types of contexts from which subject and direct object omissions are possible in colloquial adult Russian. First of all, there are contexts (as in (6)-(7)) in which the referent of the empty element has been (verbally/linguistically) established in the preceding sentence/discourse, and thus represents old information. When no linguistic referent has been established, the reference of the omitted element can be recovered from the situational context: when the referent is either one of the interlocutors, i.e. speaker or hearer (as shown in (8)-(9)), or a third party, whose reference can be established only with the help of strong non-linguistic cues provided by the speaker, such as pointing, nodding, i.e. making sure that the interlocutors look in the relevant direction, etc., as illustrated in (10)-(11). In these cases the referent of the empty element is in the center of discourse and thus of the interlocutor's attention. The situational contexts are more limited by different contextual circumstances than contexts with a linguistic antecedent present. In addition to strong non-linguistic cues provided by the speaker in the form of gesturing, the time of the event whose subject or direct object can be omitted, should be close to the time of speech. This means that in order for the subject or the object to be eligibly omitted in Russian, the sentence from which the argument(s) are omitted should refer to either an ongoing event (as in (10c), (11c)), to a state (as in (8a,b)), or to events that occurred in the immediate past (as in (10a,b)), or are intended to happen in the near future, i.e. intentional (as in (8c,d,e), (9a,b), (11a,b)).

2.3   *Objectives*

The patterns of subject and direct object omission and preservation in adult Russian just described require the knowledge of subtle discourse constraints, in

particular of what is old versus new information and what places an entity in the center of discourse. Moreover, they demand from the speaker taking into consideration the interlocutor's (i.e. listener's) knowledge and assumptions about what is the topic of discourse and thus about what represents old information. The child acquiring such a system faces an intriguing task of figuring out if and when omissions are allowed. The question, naturally, arises, to what extent young children possess the knowledge of subtle discourse constraints operating on the distribution (i.e. omission and preservation) of subjects and direct objects in adult Russian. In this paper we investigate this question. In addition, we will attempt to investigate the question of whether young Russian speaking children possess the knowledge of constraints posed by the syntactic system, such as the correlation between finiteness of verbs and overtness of subjects on the one hand, but not of objects on the other.

Previous research has shown that young children possess, rather early, at least some of the discourse knowledge of their target languages with respect to its different aspects. Thus, based on the evidence from acquisition of French dislocated structures, De Cat (2002, 2003) argues that children exhibit very early pragmatic competence required to encode topics, as early as first word combinations are attested. On the other hand, it has been shown by other researchers that the pragmatic system of children differs, at least in some aspects, from that of adults, which leads to non-adultlike patterns observed in early speech. Thus, Schaeffer (1999) proposes that children fail to produce definite and indefinite articles in obligatory contexts as a result of the lack of a pragmatic principle, the "Principle of Non-Shared Knowledge". An underdeveloped pragmatic system has also been argued to inhibit the availability of syntactic processes in child grammar, such as direct object scrambling in Dutch or direct object clitic placement in Italian (Schaeffer, 1997; 2000). Furthermore, Hyams

(1996) argues that children's grammars may contain underspecified functional categories such as I(nfl) and D(et) as a result of differences between the pragmatic system of a child and that of an adult. An underdeveloped pragmatic system in children has also been argued to account for non-adult-like patterns of subject omission in non-pro-drop languages such as Dutch and English (Weverink, 1989; Hyams, 1996; Austin et al., 1998). With regard to Russian, Gordishevsky and Schaeffer (2002) proposed that children roughly under the age of 3 omit subjects in those pragmatic contexts where it would be inappropriate to omit subjects in adult Russian due to the overextension of the "Pragmatic Identification Requirement" responsible for subject omission in adult Russian. That is, children extend the type of pragmatic contexts which license null subjects to include those pragmatic contexts where it would be inappropriate to omit subjects in adult Russian, i.e. the contexts that allow null subjects whose reference has not been identified, violating the adult rule.

Taking into consideration the different pieces of evidence just described, it might be expected that while children possess the knowledge of adultlike discourse constraints on subject and direct object omission operating in adult Russian, they might not apply this knowledge correctly and appropriately and/or might extend the adultlike set of possible constraints on subject and object omission to include the ones that are incorrect from the point of view of an adult speaker of Russian. On the basis of longitudinal data from six Russian-speaking children, we explore to what extent their subject and object omission pattern is similar and how it differs from targetlike and also try to answer the question of what can account for the observed differences.

The question of whether young Russian-speaking children are sensitive to the (morpho-)syntactic constraints on null subjects will be also investigated in this paper. In particular, we will show that, in accordance with findings in other child languages

(e.g. English, French, German, Dutch, etc.), non-finite verbs[1] co-occur with null subjects. Previous accounts have successfully explained this correlation in purely syntactic terms (cf. Wexler, 1994; Sano & Hyams, 1994; Bromberg & Wexler, 1995; Hoekstra & Hyams, 1995). Thus, Sano & Hyams (1994) propose that the null subject in child English (and in other languages) is PRO, which arises as a result of optionality of verb raising due to underspecification of I features, which, in its turn, results in non-finite root verbs, impossible in adult English. A similar proposal is outlined in Wexler (1994) and in Bromberg & Wexler (1995), with the only difference that in non-finite sentences either the entire Tense projection or the *past/nonpast* features on it are missing, which makes the verb non-finite, and hence its ability to license null subjects. Hoekstra & Hyams (1995) propose that both null subjects and root infinitives (RIs) arise as the result of underspecification of the functional head Number. Whatever the reason for the appearance of RIs, all these accounts agree that RIs give rise to null subjects. No such correlation should exist for objects, since what licenses the object is the verb's transitivity and not finiteness.

In the next section we describe the methods used for the investigation of all the issues raised in this section.

3. Methods

3.1 Subjects and analyzed data

We investigated the spontaneous speech of six Russian-speaking children, four girls and two boys, between the ages of 1;8-2;6. All children are monolingual Russian speakers whose speech was recorded in 30-45-minute sessions with 3-week intervals

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[1] The stage in which children produce non-finite root clauses, ungrammatical in adult language, is known as the Root Infinitive (or RI, following Rizzi (1994)) or Optional Infinitive (or OI, following Wexler (1992,1994)) stage. We will use both notations interchangeably in this paper.

on average. Four of the children, two girls and two boys, were recorded in Moscow, Russia, and their transcripts were kindly provided to us by Dina Brun. Two other girls (raised by monolingual Russian-speaking caregivers) were recorded in Israel by one of the authors, who also made the transcripts. All children were recorded in their home settings in the presence of at least one of the caregivers, which yielded spontaneous speech transcripts of at least 100 utterances each (and usually around 200 utterances). The transcripts studied included both the children's and the adults' utterances and detailed descriptions of contexts in which these utterances were produced. Details regarding the subjects' age, number of transcripts analyzed, etc. are provided in Table 1.

Table 1. *Subject Information*

child name	gender	age range	№ of files available	№ of files analyzed	age range (analyzed)	recording frequency
SAS	m	1;9.16-2;1.29	5	3	1;11.21-2;1.29	4 weeks
NIK	m	1;6.18-2;0.??	8	4	1;9.23-2;0.??	3-4 weeks
MUS	f	1;8.23-2;1.30	7	7	1;8.23-2;1.30	4 weeks
SIM	f	1;9.5-2;3.26	10	5	2;0.17-2;3.26	3-4 weeks
KAT	f	1;7.26-2;6.2	12	11	1;9.?-2;6.2	2-4 weeks
ZLA	f	1;8.10-2;5.12	13	12	1;9.5-2;5.12	3 weeks

As the goal of this study is to investigate the patterns of subject and direct object omissions, we were interested only in those transcripts which capture the children past the one-word stage, namely at the stage in which they produce multiple-word combinations (two words and more), containing a verb. For this reason, the files capturing the children before the two-word stage or before they started producing verbs, were excluded. Thus, we ended up with 42 files for analysis (see Table 1).

As Table 1 shows, the chronological ages at which the children reached the desired stage differ significantly (usually depending on the age at which they started producing their first words). This difference in chronological ages led us to set up

linguistic ages to describe the relevant stages of linguistic development. As most kids entered the two-word stage with first usage of verbal elements around the age of one year and nine months, we termed the initial age of the analyzed recordings for all children "linguistic age 1;9". Furthermore, in order to observe development in the studied phenomena, we divided all the analyzed files into two developmental stages: Stage 1 – linguistic ages 1;9-2;0 (25 files), and Stage 2 – linguistic ages 2;0-2;6 (17 files).

3.2   *Methods*

In order to study the phenomenon of subject and object omissions, as well as their correlation with finiteness, we selected all utterances containing a main verb, either finite or non-finite. Only main clauses were analyzed, although it should be noticed that embedded clauses were extremely rare and attested only in the older developmental stage. We excluded from our counts repetitions and completions of adult utterances, exact repetitions of the child's own preceding utterance, and utterances including non-intelligible material, since these are not representative of the child's grammar. We also excluded from our counts imperative constructions when analyzing subject presence/omission (since these *require* a null subject), but included them when analyzing direct object presence/omission. Expletive subject constructions were excluded as well, as we concentrate on thematic subjects. Finally, answers to questions of the type *Chto ty sdelal?/Chto ona delaet?* etc. ("What did you do?/What is she doing?") were also excluded, because these would inflate the numbers of adultlike null subjects (in recording sessions, such questions are asked way too often: 221 on the overall). All this is summarized in (12).

(12)   *Utterances used for analysis*
       All main clauses containing a verb, except for:
       (i)   embedded clauses;
       (ii)   repetitions and completions of adult utterances;
       (iii)   exact repetitions of child's own preceding utterance;
       (iv)   utterances including non-intelligible material;
       (v)   imperative constructions (only in case of subjects);
       (vi)   expletive subject constructions;
       (vii)   answers to questions of the type *Chto ty sdelal?/Chto ona delaet?etc.*
               ("What did you do?/What is she doing?")

For the analysis of direct object omissions, we considered all obligatorily transitive verbs. In addition, we included the instances of optionally transitive verbs that were used in clearly transitive contexts.

3.3   *Analysis*

First of all, we distinguished between finite and non-finite contexts with respect to subject and object preservation/omission. The reason for this distinction is the possibly different explanation of subject omission from finite contexts as opposed to non-finite ones. While for the finite contexts we propose a pragmatic account, subject omission from non-finite contexts has already been successfully explained in purely syntactic terms, as described in section 2.3.

In the case of non-finite verbs, we excluded from our counts infinitival constructions that are permitted in adult Russian, such as infinitival questions or constructions containing infinitives as part of complex future tense or intensional expression, such as the ones in (13).

(13)   a.   Pomoch vam?
              help-inf you
              'Can I help you?'

       b.   Ja budu risovat'.
              I will-1sg draw-inf
              'I will be drawing.'

c.   Ja xochu risovat'.
        I want-1sg draw-inf
        'I want to draw.'

All of the finite contexts chosen for analysis were divided into three categories

with respect to the type of subject/direct object, as is shown in (14):

(14)   *Types of finite contexts analyzed, i.e. those containing*
        (i)   overt subjects/objects;
        (ii)   subjects/objects dropped in adult-like manner;
        (iii)   non-adult-like null subjects/objects.

Moreover, in order to examine the correlation between finiteness of verbs and

overtness of subjects, and (allegedly) no such correlation for objects, we divided all of

the non-finite contexts chosen for analysis into two categories with respect to the type

of subject/object, as shown in (15):

(15)   *Types of non-finite contexts analyzed, i.e. those containing*
        (i)   overt subjects/objects;
        (ii)   null subjects/objects.

The next sections present the results we obtained after coding and analysis of

the available data were performed by native speakers of Russian.

4.   Results

Let us first have a general look at the omission and preservation of subjects

and direct objects in finite verbal utterances. Table 2 presents the results of subject

use in two developmental stages, and Table 3 – the results of object use in the same

developmental stages.

Table 2. *Development of subject use in finite contexts[2] (6 kids)*

Developmental stage	overt subjects	null adultlike[3] subjects	null non-adultlike subjects
Stage 1 (language age 1;9-2;0)	**41%** (331/801)	**23%** (185/801)	**36%** (285/801)
Stage 2 (language age 2;0-2;6)	**77%** (840/1090)	**17%** (184/1090)	**6%** (66/1090)

Table 3. *Development of object use in finite contexts[4] (2 kids[5]: ZLA & KAT)*

Developmental stage	overt objects	null adultlike objects	null non-adultlike objects
Stage 1 (language age 1;9-2;0)	**51.5%** (124/240)	**24.5%** (59/240)	**24%** (57/240)
Stage 2 (language age 2;0-2;6)	**68%** (298/436)	**21%** (91/436)	**11%** (47/436)

As can be seen from the two tables above, subjects and objects in finite contexts in young Russian-speaking children show a very similar pattern. In developmental stage 1 (language age 1;9-2;0), subjects and objects are overt in 41% and 51.5% of the cases, respectively. The children drop 23% subjects and 24.5% objects in adultlike manner (i.e. consistent with the conditions outlined for adult Russian in section 2.2 above), and 36% subjects and 24% objects in non-adultlike manner (i.e. violating the conditions operating in adult Russian). In developmental stage 2 (language age 2;0-2;6), we observe 77% overt subjects and 68% objects, 17%

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[2] In sentences with a finite verbal element, excluding answers to questions of the type outlined in fn. 2, subject questions, arbitrary/generic/impersonal/expletive constructions, and imperatives.

[3] Excluding answers to questions of the type "What are/is you/he doing?", "What did he/she do?" (=*chto ty/on delaesh/delaet?, chto on/a sdelal/a?*)

[4] In sentences with a finite verbal element, including imperatives, and excluding direct object questions, such as "What did you take?"

[5] As the transcripts of the other four children were made not by ourselves, the relevant contextual comments were frequently omitted, which made it impossible to determine the adultlike/non-adultlike status of the object in many cases.

subjects and 21% objects dropped in adultlike manner, and only 6% subjects and 11% objects dropped in non-adultlike manner.

As the next step, we examined the behavior of subject and object omission in non-finite contexts, i.e. in main clauses containing non-adultlike non-finite verbs, known in the literature as Optional or Root Infinitives (Wexler, 1992, 1994; Rizzi 1993/1994). Our results are summarized in Table 4 below.

Table 4. *Overtness of subjects and direct objects with Optional Infinitives (2 kids: ZLA & KAT)*

Developmental stage	subject		object	
	subject null	subject overt	object null	object overt
Stage 1 (1;9-2;0)	**88%** (64/73)	**12%** (9/73)	**36%** (8/22)	**64%** (14/22)
Stage 2 (2;0-2;6)	**100%** (13/13)	**0%** (0/13)	**40%** (4/10)	**60%** (6/10)

Our results are consistent with previous research in other child languages (Rhee and Wexler, 1995; Sano and Hyams, 1994 , Bar-Shalom et al., 1996). In particular, the results show that while in both developmental stages almost all Optional Infinitives appear with null subjects (88% and 100% in stages 1 and 2, respectively), no such correlation exists for direct objects. The object of OIs is null 36% of the time in the first developmental stage and 40% of the time in the second developmental stage, while it is overt in 64% and 60% of the cases in the respective stages.

5.   Discussion of Results

5.1   *Omission of Subjects and Objects from Finite Contexts*

With regard to the results of subject and direct object omission, the following observations can be made. The first observation is that, unlike English, where there is a clear difference between subject and object drop (Bloom, 1990; Hyams & Wexler,

1993; etc.), Russian children omit both subjects and objects, which is in agreement with the option available in adult Russian. Thus, in the younger group (ages 1;9-2;0) we observe 23% of adultlike and 36% of non-adultlike subject omission and 24.5% of adultlike and 24% of non-adultlike object omission. In the older group (ages 2;0-2;6) we observe 17% of adultlike and 6% of non-adultlike subject omission and 21% of adultlike and 11% of non-adultlike object omission. The finding that Russian-speaking children omit both subjects and objects is in accordance with the target-like option, which shows the children's sensitivity to the adult principles guiding argument omission. The non-adult omissions will be explained below.

Our results in child Russian are in sharp contrast with results from child English, which reveal a clear quantitative difference between subject and object omission. Thus, Bloom (1990) reports an average of 55% of subject omission and only 9% of object omission for three children, Adam, Eve, and Sarah, between the ages of 1;6 and 2;7. Hyams & Wexler (1993) present similar results for the two children, Adam and Eve, dividing their speech files into two developmental periods. In Period 1, they observed in total 48% of subject omission and 9% of object omission, and in Period 2, 22% of subject omission and 8% of object omission.

As can be seen, the percentages of subject omission and the percentages of object omission are strikingly similar in child Russian (as opposed to child English), suggesting that with respect to overall omissions, children's performance is driven by the same (non-syntactic, non-morphological) factors as exist in adult Russian. Let us have a look, however, at the non-adultlike omissions that were observed in files analyzed by us. Some examples are presented in (16) and (17).

(16)   *Non-adultlike subject omissions*

    a.   %looks at the swing   (MUS2 -1;9.21)
        *CHI: *e* kachajutsa.
        %glo: swing-3pl
        *ADU: Kachajutsa? Kacheli?

    b.   *CHI: *e* napisala.   (MUS2 -1;9.21)
        %glo: peed-fem
        %points at a wet stain on the blanket, refers to herself

    c.   *CHI: *e* guljala.   (KAT1 -1;9.??)
        %glo: walked-fem
        %out of the blue, referring to herself

    d.   *CHI: Aj aj aj, *e* poju.   (KAT2 -1;9.28)
        %glo: ay ay ay   sing-1sg
        %out of the blue, referring to herself

    e.   *ADU: lajet sobaka? (ZLA1 -1;9.5)
        *CHI: da, *e* bojus'.
        %glo: yes   scared-1sg

    f.   %watches tv. (ZLA5 -1;11.19)
        *CHI: *e* idut.
        %glo: walk-3pl

    g.   %returns from the bathroom, talks about mother. (ZLA5 1;11.19)
        *CHI: *e* sprjatala dush.
        %glo: hid-fem shower

    h.   *ADU: a eto chto?   (NIK1 -1;9.23)
        *CHI: mashina.
        %glo: car
        *CHI: *e* otkryvaet.
        %glo: opens-3sg
        *ADU: kogda mashina lomaetsa, djadja otkryvaet kapot.

    i.   %a toy car falls   (NIK2 -1;10.19)
        *CHI: *e* upala.
        %glo: fell-fem
        *ADU: upala mashina, da.

    j.   *CHI: *e* ne mogu.   (SAS1 -1;11.21)
        %glo: not can-1sg
        %uttered out of the blue
        *ADU: chto ty ne mozhesh?

    k.   *CHI: *e* ne slyshit. (SAS1 -1;11.21)
        %glo: not hears-3sg
        %talks about the experimenter

(17)   *Non-adultlike direct object omissions*

    a.   *ADU: smotri, chto tut narisovano?   (KAT4 -1;10.20)
           *CHI: odjela, odjela *e* .
           %glo: dressed-fem dressed-fem
           *ADU: chto devochka odela?

    b.   *CHI: vsjo, njetju, njetju, njetju.   (KAT4 -1;10.20)
           *CHI: katja sjela *e* .
           %glo: katja ate-fem up
           *ADU: katEn'ka vsjo s'jela, nikomu ne ostavila.

    c.   *CHI: daj *e* . (KAT4 -1;10.20)
           %glo: give-imper
           *ADU: chto daj?

    d.   *ADU: a chto katja budet v kino delat'?   (KAT5 –1;11.20)
           *CHI: budem videt' *e* .
           %glo: will-1pl see-inf
           *ADU: videt' budem ejo?
           *CHI: da.

    e.   *ADU: zlata, kakaja tjotja?   (ZLA2 -1;9.24)
           %previously talked about a woman who took away CHI's sandals.
           *ZLA: zabrala *e* .
           %glo: took-fem away

    f.   %plays with a dog, the dog runs away and CHI falls. (ZLA2 -1;9.24)
           *CHI: sabaka.
           %glo: dog
           *ADU: chto?
           *CHI: pabila *e* .
           %glo: beat-past-fem
           *ADU: kogo sobaka pobila?
           *CHI: zlatu.

    g.   *CHI: dostan' *e* .   (ZLA3 -1;10.11)
           %glo: get-imper
           *ADU: chto tebe dostat'?
           *CHI: dostan' igrushku.
           %glo: get-imper toy-acc

    h.   %goes to another room.   (ZLA3 -1;10.11)
           *CHI: idi prinesu *e* , idi prinesu *e* .
           %glo: go-imp will-bring-1sg
           *ADU: a chto ty tam ishchesh?
           *CHI: isi tapki.
           %glo: look-for-imper slippers

i.   %previously played with a stick, goes to mother.   (ZLA4 -1;10.28)
     *CHI: mame dam *e* .
     %glo: mommy-dat will-give-1sg
     *CHI: dam mame *e* .
     %glo: will-give-1sg mommy-dat

j.   %watches TV.   (ZLA5 -1;11.19)
     *CHI: mal'chiki.
     %glo: boys
     *ADU: a chto oni delajut?
     *CHI: stroiti *e* .
     %glo: build-2pl
     *ADU: chto?

k.   %plays with a doll, picks a toy shoe from the floor. (ZLA6 -2;0.9)
     *CHI: odela *e* .
     %glo: put-past-fem on
     *ADU: ona skazala odela, da?
     *CHI: odela tapi.
     %glo: put-past-fem on slippers

In all the examples above, the children violate the adult constraints on argument omission, outlined in section 2.2, in that they make no verbal reference to the omitted element, i.e. do not establish an antecedent linguistically (as in all of the examples in (16) and (17)); do not provide non-linguistic cues, such as pointing, nodding, in order to make sure that the interlocutors look in the relevant direction, i.e. do not explicitly place the entity in the center of discourse (as in e.g. (16a,f,k)); and use event time that is not close to the time of speech, i.e. sometimes the children refer to events that occurred in non-observable past (as in (16b,c) and (17e)). This is summarized in (18):

(18)   Children's violations of adult constraints on subject and object omission:

    a)   no verbal reference;
    b)   no non-linguistic cues, such as gesturing;
    c)   event time is not close to the time of speech.

The question of why young children violate the mentioned constraints arises. The answer, in our view, lies in the developing pragmatic system. Specifically,

following Schaeffer (1999), we hypothesize that young children lack a pragmatic principle, namely the "Concept of non-shared knowledge", formulated in (19):

(19)   *Concept of non-shared knowledge (pragmatic)*   (from Schaeffer, 1999)
        Speaker and hearer knowledge are always independent

As Schaeffer (1999) explains, the Concept of non-shared knowledge requires the speaker to consider the hearer's knowledge as distinct from the speaker's knowledge. That is, what is known to the speaker is not necessarily known to the hearer, unless it has been explicitly established in the discourse, either verbally or using extra-linguistic cues. Thus, for an entity to represent discourse-old information, the speaker must establish its reference using one of the means outlined in section 2.2.

However, if the Concept of non-shared knowledge is absent, the speaker may attribute his/her own knowledge to the hearer, which should not be the case in adult language, but is often the case in early child language. The lack of this pragmatic concept leads the child to attribute his/her own discourse knowledge to the hearer, and thus refer to a discourse-new entity (from the point of view of the hearer) as if it was discourse-old, violating the necessary requirement of establishing its reference first. As a result, discourse-new subjects and direct objects are omitted in early child speech, violating the adult rule.

5.2   *Development in Subject and Object Omission*

Moreover, a clear development can be observed from developmental stage 1 to developmental stage 2: the percentage of overt subjects in finite clauses rises from 41% to 77%, and of overt objects – from 51.5% to 68%. Non-surprisingly, a reversed tendency is observed for arguments dropped in non-adult manner: the number of non-adultlike null subjects drops from 36% to 6 % and the number of non-adultlike null

objects from 24% to 11%. Interestingly, there is almost no change in the number of arguments omitted in adultlike manner from stage 1 to stage 2: 23% and 17% for subjects, and 24.5% and 21% for objects. It is also interesting to note that in adult Russian the rate of subject omission from finite contexts is very similar to that observed in children, namely 24% (59/244)[6]. The results of adultlike omissions in children and their similarity to the results from adults lead us to the conclusion that children are sensitive to and are guided by the same principles of subject and direct object omission as adult speakers of Russian are. The additional factor that leads the children to omit arguments in the contexts where adults would not do so is the lack of the pragmatic Concept of non-shared knowledge, which has been discussed in section 5.1 above.

5.3   *Subject and Object Omission from Non-Finite Contexts*

There is, however, a constraint imposed by the syntactic system. As observed by other researchers (Wexler, 1994; Sano and Hyams, 1994; Hoekstra and Hyams, 1995, among others), the omission of subjects in non-finite clauses is significantly higher than in finite clauses, while no such difference exists for objects (as has been explained in section 2.3 above). That is, there is a correlation between finiteness of verb and overtness of subject: RIs trigger null subjects. Indeed, for the younger group, we found 88% (64/73) of non-adultlike subject omission as opposed to 36% (8/22) of object omission from non-finite clauses. In the older group, the opposition was preserved: 100% (13/13) of non-adultlike subject omission versus 40% (4/10) of object omission from non-finite clauses. Based on this difference, we conclude that Russian speaking children possess, rather early, a subtle knowledge of syntactic

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[6] We analyzed adult speech in a one-hour episode of Russian TV series *Prostye Istiny* ("Simple Truths").

constraints, e.g. correlation between finiteness and overt subjects, but no such correlation for objects.

6.   Conclusion

To summarize, we have shown that from very early on (i.e. from the initial stage exhibiting two-word verbal utterances), young Russian-speaking children are capable of taking into consideration contextual circumstances that determine the choice of the type of subject and direct object in adult Russian. Thus, similar to adult Russian speakers, Russian-speaking children omit both subjects and objects to a similar extent, which shows their sensitivity to the adult principles guiding argument omission. Our results are in sharp contrast with results from child English, which reveal a clear quantitative difference between subject and object omission. The non-adult omissions were explained by the lack of the pragmatic Concept of non-shared knowledge, which differentiates speaker knowledge from hearer knowledge.

Moreover, we have shown that even very young Russian-speaking children (aged 1;8) conform to the constraints posed by the syntactic system, such as the correlation between finiteness of verbs and overtness of subjects on the one hand, but not of objects on the other. This finding is in accordance with findings in other child languages.

References

Austin, J., M. Blume, D. Parkinson, Z. Núñez del Prado, and B. Lust (1998) "Interactions between Pragmatic and Syntactic Knowledge in the First Language Acquisition of Spanish Null and Overt Pronominals." In Lema Jose (ed.) *Theoretical Analyses on Romance Languages*. John Benjamins, Amsterdam, 35-51.

Avrutin, S. (in press) "Beyond Narrow Syntax." To appear in: L. Jenkins (ed.) *Genetics of Language.* Routledge.

Avrutin, S., and B. Rohrbacher (1997) "Null Subjects in Russian Inverted Constructions." In W. Browne, E. Dornisch, N. Kondrashova, and D. Zec (eds.) *Proceedings of the Fourth Annual Workshop on Formal Approaches to Slavic Linguistics*. Michigan Slavic Publications, Ann Arbor, 32-53.

Bar-Shalom, Eva, William Snyder, and Jason Boro (1996) "Evidence for the Optional Infinitive Stage in Russian." In A. Halbert and K. Matsuoka (eds.). *Papers in Honor of Stephen Crain: Language Acquisition and Processing*. Storrs, CT: University of Connecticut Working Papers in Linguistics.

Bloom, P. (1990) "Subjectless Sentences in Child Language." *Linguistic Inquiry*, 21(4), 491-504.

Bromberg, H. S., and K. Wexler (1995) "Null Subjects in Child *Wh*-Questions." In C.T. Schutze, J.B. Ganger, and K. Broihier (eds.), *MIT Working Papers in Linguistics 26*, 221-247.

De Cat, C. (2002) *French Dislocation*. PhD thesis. University of York.

De Cat, C. (2003) "Syntactic Manifestations of Very Early Pragmatic Competence." In B. Beachley, A. Brown, and F. Conlin (eds.), *Proceedings of BUCLD 27*. Cascadilla Press, Somerville, MA, 209-219.

Franks, S. (1995) *Parameters of Slavic Morphosyntax*. Oxford University Press, Oxford.

Gordishevsky, G., and J. Schaeffer (2002) "On Null Subjects in Child Russian." In Y. Otsu (ed.), *The Proceedings of the Third Tokyo Conference on Psycholinguistics*. Hituzi Syobo, Tokyo, 115-137.

Grosz, B., A. Joshi, and S. Weinstein (1986) "Towards a computational theory of discourse interpretation." Unpublished ms.

Grosz, B., A. Joshi, and S. Weinstein (1995) "Centering: A Framework for Modeling the Local Coherece of Discourse." *Computational Linguistics* 2 (21), 203-225.

Haan, G. de, and K. Tuijnman (1989) "Missing Subjects and Objects in Child Grammar." In P. Jordens and J. Lalleman (eds.) *Language Development*. Foris, Dordrecht, The Netherlands, 110-122.

Haegeman, L. (1990) "Understood Subjects in English Diaries." *Multilingua 9*,157-199.

Hamann, C. (1995) "Null Arguments in German Child Language." In D. MacLaughlin and S. McEwen (eds.) *Proceedings of BUCLD 19*. Cascadilla Press, 240-254.

Hoekstra, T., and N. Hyams (1995) "The Syntax and Interpretation of Dropped Categories in Child Language: A Unified Account." *Proceedings of WWCCFL XIV*, Stanford University.

Hyams, N. (1996) "The Underspecification of Functional Categories in Early Grammar." In Harald Clahsen (ed.) *Generative Perspectives on Language Acquisition*. John Benjamins, Amsterdam, The Netherlands, 91-127.

Hyams, N., and K. Wexler (1993) "On the Grammatical Basis of Null Subjects in

Child Language." *Linguistic Inquiry*, 24, 421-459.

Kraemer, I. (1993) "The Licensing of Subjects in Early Child Language." In C. Phillips (ed.) *MIT Working Papers in Linguistics* 19.

Lindseth, M., and S. Franks (1996) "Licensing and Identification of Null Subjects in Slavic." In J. Toman (ed.) *Proceedings of the Third Annual Workshop on Formal Approaches to Slavic Linguistics*. Michigan Slavic Publications, Ann Arbor, 199-224.

Matushansky, O., and K. Wexler (2002) "Again on the Subject of English Null Subjects: Discourse and Syntax." In J. Costa and M.J. Freitas (eds.) *Proceedings of the GALA 2001 Conference on Language Acquisition*. Lisboa, 164-171.

Rhee, J., and K. Wexler (1995) "Optional Infinitives in Hebrew." *MIT Working Papers in Linguistics 26*, 383-402.

Rizzi, L. (1993/1994) "Some Notes on Linguistic Theory and Language Development: The Case of Root Infinitives." *Language Acquisition*, 3(4), 371-393.

Rizzi, L. (1994) "Early Null Subjects and Root Null Subjects." In T. Hoekstra and B.D. Schwartz (eds.) *Language Acquisition Studies in Generative Grammar*. John Benjamins, Amsterdam, 151-176.

Sano, T., and N. Hyams (1994) "Agreement, Finiteness, and the Development of Null Arguments." *Proceedings of NELS 24*, GLSA, Amherst, 543-558.

Schaeffer, J. (1997) Direct Object Scrambling in Dutch and Italian Child Language. UCLA. Dissertations in Linguistics. 17.

Schaeffer, J. (1999) "Articles in English child language." Talk presented at the Linguistics Society of America, LA.

Schaeffer, J. (2000) *The Acquisition of Direct Object Scrambling and Clitic Placement: Syntax and Pragmatics*. John Benjamins, Amsterdam.

Valian, V. (1991) "Syntactic Subjects in the Early Speech of American and Italian Children." *Cognition*, 40, 21-81.

Weverink, M. (1989) *The Subject in Relation to Inflection in Child Language*. MA thesis, University of Utrecht.

Wexler, K. (1992) "Optional Infinitives, head movement and the economy of derivation in child grammar." Occasional paper #45, Center for Cognitive Science, MIT.

Wexler, K. (1994) "Optional infinitives, head movement, and the economy of derivation in child grammar." In D. Lightfoot and N. Hornstein (eds.) *Verb movement*. Cambridge University Press, Cambridge, UK, 305-350.