Object raising and Cliticization in Serbo-Croatian Child Language

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1. INTRODUCTION

The Root Infinitive (RI) stage, is a phenomenon widely attested in the early acquisition of many languages, such as Dutch, French, German, etc. Examples of RIs are given in (1) below from Dutch and French.

(1) a. Papa schoenen wassen  (Dutch, Weverink, 1989)
Daddy shoes wash-inf

b. Michel dormir  (French, Pierce, 1992)
Michel sleep-inf

The RI stage is commonly described as a stage in which verbs optionally fail to raise to INFL and check the finite features of tense and agreement. Hyams (1996) accounts for this phenomenon by arguing that finiteness, or temporal specificity in children’s root clauses, is only optionally marked. Noticing the parallel between the verbal and the nominal system, Schaeffer (1997) argues that a) optionality of object scrambling and b) optional realization of object clitics in obligatory contexts in Dutch child language are a consequence of optionally marked nominal specificity, i.e. underspecification of the functional head D with respect to the specificity feature. From the results of an elicited production task for 2 and 3 year-old children, Schaeffer notices considerable development towards adultlike performance. In this paper we will review Schaeffer’s findings in section 1; give a brief review of object raising and cliticization in adult Serbo-Croatian in section 2; in section 3 we give predictions based on Schaeffer’s results for Dutch 3-year olds, describe our methodology, and present the results of our analysis of child Serbo-Croatian; in section 4 we discuss the results of the analysis. We show that at 3 years of age the Serbo-Croatian children (i) appropriately raise specific objects (both lexical and pronominal); (ii) select the appropriate form of pronouns (clitics or full pronouns) depending on discourse-specific factors such as focus. Finally, we conclude that knowledge of specificity, as well as discourse principles that govern the form of pronouns, are evidenced in early Serbo-Croatian.

1.1. OBJECT SCRAMBLING IN DUTCH ADULT AND CHILD LANGUAGE.

In order to test the hypothesis of underspecification of nominal specificity in early Dutch, Schaeffer (1997) focuses on two syntactic processes, a) direct object scrambling and b) direct object clitic placement, both of which involve
the specificity feature. In adult Dutch all direct objects which are specific (that is, co-refer with an antecedent in the preceding discourse) obligatorily scramble. This is evident in sentences with negation or adverbs. Thus, specific lexical objects and object clitics obligatorily occur before negation/adverb. This is illustrated in examples (2), and (3).

(2) Scrambling of definite lexical objects over sentential negation (Schaeffer 1997):
   Koekiemonster gaat de boom niet inkleuren!
   Cookiemonster goes the tree not in-color
   ‘Cookiemonster is not going to color the tree.’
   *Koekiemonster gaat niet de boom inkleuren!

(3) Scrambling of object clitics (Schaeffer 1997):
   dat Saskia ‘t niet gezien heft
   that Saskia it not seen has
   ‘that Saskia didn’t see it’
   *dat Saskia niet ‘t gezien heft

Schaeffer conducted an elicited production task with 49 Dutch children ranging in age from 2 to 7 years. The results confirmed Schaeffer’s predictions that both object scrambling and the realization of object clitics are optional in early Dutch grammar. However, at the age of 3, children demonstrated significant development towards adultlike performance. In Table 1 we present only those results which are relevant for this paper, namely the scrambling of object clitics and definite lexical objects in obligatory contexts. Furthermore, we focus on the results of the 2 year olds and 3 year olds, as these age groups most closely match the Serbian children in our study.

Table 1. Scrambling of definite lexical objects and realization of object clitics in Dutch child language (adapted from Schaeffer 1997: 534-535).

<table>
<thead>
<tr>
<th>Age</th>
<th>Definite lexical objects</th>
<th>Object clitics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>scrambled</td>
<td>unscrambled</td>
</tr>
<tr>
<td>2</td>
<td>7 (30%)</td>
<td>16 (70%)</td>
</tr>
<tr>
<td>3</td>
<td>26 (72%)</td>
<td>10 (28)</td>
</tr>
<tr>
<td>Adults</td>
<td>105 (96%)</td>
<td>4 (4%)</td>
</tr>
</tbody>
</table>

Based on this data, Schaeffer (1997) concludes that nominal specificity is only optionally marked in early Dutch grammar. At the age 3 however the option of underspecification is less readily available. Schaeffer hypothesizes that discourse knowledge has been acquired by the 3-year olds, which accounts for this development.
2. Adult Serbo-Croatian

We now turn to adult Serbo-Croatian. Serbo-Croatian is a South-Slavic language with inflectional morphology and subject pro-drop. It has a basic SVO word order, but the object may move leftward under the appropriate conditions.

2.1. PLACEMENT OF DIRECT OBJECTS.

Object DPs in Serbo-Croatian can occur in three different positions: utterance-final, utterance-medial, and utterance-initial position. This is illustrated in examples (4) through (6).

Utterance-final position:

(4) Dete ye uzyahalo magarca
Child.NOM AUX mounted donkey.ACC
‘The child mounted the/a donkey.’

Utterance-medial position:

(5) Dete ye magarca uzyahalo.
Child.NOM AUX donkey.ACC mounted
‘The child the/*a donkey’ mounted. (lit.)
‘The child mounted the donkey.’

Utterance-initial position:

(6) Magarca ye dete uzyahalo.
Donkey.ACC AUX child.NOM mounted
‘The/*a donkey the child mounted.’ (lit.)
‘The child mounted the donkey.’

The utterance final position is reserved for new or focused information. Because lexical direct objects typically represent new information, they commonly occur utterance finally, as in (4). On the other hand, a lexical object representing old information may either remain in sentence final position or move leftward to utterance-medial or utterance-initial position, as in (5) and (6) respectively. When leftward movement occurs, the object is obligatorily specific. Because the difference between utterance-medial and utterance-initial position is not relevant to our paper, we make no distinction between them, but reserve the term “raised” for both these positions. Thus Serbo-Croatian has two positions for direct objects: unraised (which does not require specificity), and raised (which does require specificity). Table 2 illustrates the correlation between specificity of a direct object DP and its position.

<table>
<thead>
<tr>
<th></th>
<th>Raised (utterance-medial and initial position)</th>
<th>Unraised (utterance-final position)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 2.</strong></td>
<td>Correlation between specificity and placement of lexical direct objects.</td>
<td></td>
</tr>
</tbody>
</table>
Thus, motivation for raising is not specificity per se, but other pragmatic conditions. What’s important here, however, is that raising may only occur with specific objects.

2.2. Personal Pronouns

There are two kinds of pronouns in Serbo-Croatian: full pronouns, and clitic pronouns. Clitics are pragmatically more neutral and cannot bear focus. Therefore clitics may not occur in utterance final position, which recall, is a position that receives focus. Instead, they undergo obligatory cliticization, which involves raising to second position. Full pronouns, on the other hand, may bear focus, and thus may occur in utterance final position. Examples (7) and (8) show a clitic pronoun in utterance-second position, and a focused full pronoun in utterance-final position.

(7) Cliticized object personal pronoun:
Dete ga ye uzyahalo.
Child.NOM him.CL AUX mounted.
‘The child mounted it.’

(8) Focused full object personal pronoun:
Dete ye uzyahalo nyega.
Child.NOM AUX mounted him.ACC.
‘The child mounted it.’

Table 3 summarizes these pronominal form/position facts.

<table>
<thead>
<tr>
<th>Pronominal object position</th>
<th>Raised (utterance-medial and initial position)</th>
<th>Unraised (utterance-final position)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clitic Pronoun</td>
<td>✓</td>
<td>*</td>
</tr>
<tr>
<td>Full pronoun</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

3. OBJECT RAISING AND CLITICIZATION IN SERBO-CROATIAN CHILD LANGUAGE – PREDICTIONS, METHODOLOGY, AND RESULTS.

3.1. Predictions.
Assuming that specificity is a prerequisite for object raising, these data pose an interesting test case for Schaeffer’s proposal. However, if Serbo-Croatian children have full knowledge of the feature specificity, then we make following predictions for child Serbo-Croatian:

Prediction 1: Raising of lexical objects will only occur with specific objects. Therefore all raised lexical objects are predicted to be specific. Note that no prediction is made about the specificity of sentence final lexical objects, as both specific and non-specific objects may occur in this position.

Prediction 2: Clitic pronouns, being specific and unable to take focus, will always be raised.

Prediction 3: Full pronouns may occur raised or unraised.

3.2. METHODOLOGY

In order to test the above predictions we analyzed data collected from naturalistic speech of three 3-year-old monolingual speakers of Serbo-Croatian: Marija, Marko, and Ivan. We transcribed the conversations we recorded with the children and identified direct object DPs based primarily on their case marking, absence of preposition, and context. We counted the total number of lexical direct objects vs. total number of direct object personal pronouns, and classified them according to their position in the utterance into two groups: raised and unraised. Finally, we analyzed the correlation between utterance position and specificity of the lexical objects, and the correlation between utterance position, form and discourse function of the object personal pronouns. Specificity of the DPs was determined on the basis of linguistic context, i.e. every direct object nominal which was coreferred with an antecedent in the previous discourse was identified as specific.

In addition to naturalistic data, we carried out an elicited production task with three 3-year old children, Marija, Ivan and Lana, to determine whether they choose the appropriate clitic form of object personal pronoun in a scenario designed to elicit a clitic, and whether they raise it to the second position. The scenario contained 35 questions based on three well-known stories (Snow White, Wolf and seven lambs, and The jungle book). These stories were told to the children prior to the test to ensure that they were familiar with the stories and could readily recall the relevant details. The stories were told in a natural way, and the test focused only on the designed scenarios, as exemplified in (9a) and (9b).

(9a) Two scenarios for eliciting of clitics:

Researcher: Zmiya Ka hochye da poyede Mogliya. Shta ce zmiya Ka da uradi Mogliyu?
The snake Kaa wants to eat Mowgli. What is the snake going to do with Mowgli?
3.3. RESULTS.

3.3.1. LEXICAL DIRECT OBJECTS

Table 4. summarizes the results of our analysis, showing a correlation between the position and specificity of lexical direct objects in child Serbo-Croatian.

<table>
<thead>
<tr>
<th>Lexical Direct Objects</th>
<th>Marko</th>
<th>Marija</th>
<th>Ivan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raised</td>
<td>Unraised</td>
<td>Total</td>
</tr>
<tr>
<td>Non-specific</td>
<td>0</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Specific</td>
<td>15</td>
<td>64</td>
<td>79</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>79</td>
<td>94</td>
</tr>
</tbody>
</table>

The results of the analysis show that most of the lexical objects are unraised, i.e. most lexical objects occur in the sentence-final position, which is the preferred position for lexical objects (79 out of 94 for Marko, 113 out of 122 for Marija, and 39 out of 43 for Ivan). Secondly, all raised lexical objects except one are specific, which we have marked in the table using the asterisk. That is, all but one are already mentioned in the preceding linguistic context (15 out of 15 raised lexical objects are specific for Marko, 8 out of 9 for Marija, and 4 out of 4 for Ivan). Thus it appears that the Serbo-Croatian children do not raise non-specific lexical objects, showing Prediction 1 to be correct.

3.3.2. Personal Pronouns in Child Serbo-Croatian
The results of our analysis of the personal pronoun data is presented in table 5 below.

**TABLE 5.** Raising of direct object personal pronouns in child Serbo-Croatian (based on naturalistic speech data)

<table>
<thead>
<tr>
<th>Object Personal Pronouns</th>
<th>Marko</th>
<th>Marija</th>
<th>Ivan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raised</td>
<td>Unraised</td>
<td>Total</td>
</tr>
<tr>
<td>Full Pronoun</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Clitic</td>
<td>32</td>
<td>*2</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>2</td>
<td>36</td>
</tr>
</tbody>
</table>

There are several results in table 5 that are noteworthy. First, object personal pronouns are appropriately raised. For example, of the 36 personal pronouns from Marko’s data, 34 occur in a raised position. Of the 86 personal pronouns in Marija’s data, 81 occur raised. And finally 17 out of 21 personal pronouns in Ivan’s data occur raised. Second, full pronouns may occur in either raised or unraised positions, e.g., Marija raises full pronouns 5/10 times. Thirdly, and most importantly, only 2 clitics remained in ungrammatical unraised position in the data. These two tokens occur in the data from Marko and are marked with an asterisk in the table. This constitutes an error rate of approximately 5%. The other two children produced a combined total of 93 clitics, of which all 93 were appropriately raised. Thus the conclusion is that, as per Prediction 2, the form/position contingency of clitic pronouns is respected by Serbo-Croatian children.

Turning now to the results from the elicited production data presented in table 6 below.

**TABLE 6.** Realization and placement of direct object clitics in child Serbo-Croatian (based on experimental data)

<table>
<thead>
<tr>
<th></th>
<th>Marija</th>
<th>Lana</th>
<th>Ivan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raised</td>
<td>Omitted</td>
<td>Target</td>
</tr>
<tr>
<td>Clitic</td>
<td>33</td>
<td>*2</td>
<td>35</td>
</tr>
</tbody>
</table>

From table 6, the following facts are clear. First, the rate of clitic omission was extremely low (2 omissions out of 35 for Marija, 0 out of 35 for Lana, and 2 out of 35 for Ivan). More importantly, whenever a clitic occurred, it occurred in the appropriate raised position. This is true for naturalistic speech as well, where
Object personal pronoun clitics also occurred in second position, both in complement clauses (10), and simple clauses (11). Errors were highly infrequent.

(10) Object clitic in the finite complement clause
A gde mogu [da ga zalepim]?   (Marko)
‘Where may I glue it?’

(11) Object clitic in the simple clause
Ti ga nosi!     (Marko)
‘You carry it!’

Example (12) represents the purposeful use of the unraised full object personal pronoun in order to make it focused.

(12) Unraised, focused full object personal pronoun
A gleday mene, sva izubiyana.    (Marija)
‘And look at me, all in sores.’

4. DISCUSSION AND CONCLUSION

Summarizing the results for both lexical objects and object personal pronouns (Table 7.), we conclude that Serbo-Croatian 3-year olds demonstrated knowledge of the correlation between specificity and raising. This result confirms results from other studies on the acquisition of specificity in other languages. For example, Avrutin & Brun (2001) show that Russian children show knowledge of the distributional restrictions of specific nominals from as early as age 2.

<table>
<thead>
<tr>
<th></th>
<th>Object Personal Pronouns</th>
<th>Lexical Objects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Furthermore, we conclude that Serbo-Croatian 3-year olds demonstrated knowledge of the discourse principles that determine the form of the pronoun (either clitic or full). These results lend credence to Schaeffer’s (1997) proposal that pragmatic knowledge of the restrictions on specific nominals is an important factor in the acquisition of the feature specificity. It should be noted that while these results are contradictory to the Dutch results, they in no way disconfirm the Dutch results. In other words, it is entirely feasible that specificity in Dutch is delayed for language-specific reasons. However, importantly, as a growing body of literature is now showing, this delay is not cross-linguistic and thus should not be attributed to any universal principles of language acquisition.

References:


Appendix:

(1) Specific utterance initial object as a response to a clarification request (Marko):

Researcher: I shta ye bilo dalye?
And what happened next?
Marko: I onda ye upalio svetlo.
And then he turned on the light.
Researcher: Shta ye upalio?
What did he turn on?
Marko: Svetlo ye upalio.
Light he turned on. (lit.)

(2) Lexical object raising with contrasting effect (Marija):

I onda ja drugi put idem, kad onda ja berem cvece: ruzu, ruzu, ‘And then I go again, picking flowers: rose, rose, rose, and I think it’s ruzu, mislim da je to torta. I ya yedem tortu, a cvetichye drzim u a cake. So I eat the cake, and the flowers I hold in my hand.’

ruki.
(3) Lexical object raising with the verb in the focus (Ivan):

Ivan: Onda donešemo slike.
And then we bring the pictures.

Researcher: I onda?
And then?

Ivan: Onda sve slike zalepimo.
Then we all the pictures glue (onto the wall).