WHERE IS THE FEATURE [DEFINITE] ENCODED IN RUSSIAN? : EMPIRICAL DATA FROM L2 ACQUISITION

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Abstract
For close to two decades, researchers have wrestled with the controversial issue of whether languages without overt articles have a DP projection (Pereltsvaig, 2007; Progovac, 1998; Rappaport, 1998, 2001), or whether they lack this functional category (Bošković, 2005, 2008; Trenkic, 2004; Zlatić, 1998). The existence of the DP in Russian is examined in the present study by investigating the acquisition of (in)definiteness in L2 Russian by L1 English learners. In Russian, adjectival modifiers denoting possession give an indefinite interpretation of the possessor (e.g., ženskij’ golos (woman-adj. voice) ‘a woman’s voice’), whereas postnominal possessive genitive modifiers can express either definiteness or indefiniteness (e.g., golos ženšiny (voice (of) woman-noun-gen) ‘a/the woman’s voice’) (Apresjan, 1995). The claim is that the null D [possession] requiring genitive case is unmarked, whereas the null D [default] with no requirement of a specific case is interpreted as indefinite.

The present study investigates whether L1 speakers of an overt article language (i.e., English) are able to acquire [±def] when it is not overtly realized in the L2 (i.e., Russian). Participants include 24 English-speaking learners of Russian (15 intermediate- and 9 superior-level students) and 14 Russian native controls. An acceptability judgment task on a 5-point scale was used. Findings of the study show that the superior-level learners demonstrated target-like knowledge on indefinite and definite readings.

The property examined in this study is underdetermined in the learners’ L1, the L2 input and in L2 instruction. Thus, the native-like performance of the superior-level learners constitutes evidence that the L2 acquisition of [±definite] interpretation is constrained by Universal Grammar, more specifically, by the universal functional category Determiner encoding [±definite]. This provides evidence that Russian has the DP projection which is a universal category. Findings of the study would shed light on the much-debated issue of the NP-structure in languages without overt articles.

1. Introduction
The internal structure of nominal phrases has been a focus of controversy in theoretical syntax. On the one hand, much recent work on the nominal phrase structure has attempted to show that a noun phrase (NP) is always headed by a functional category, Determiner (D), universally across languages (Bernstein, 1997, 2001a, 2001b, 2008; Bowers, 1991; Longobardi, 1994, 2001). On the other hand, it has been argued that NPs may or may not project the functional category, the determiner phrase (DP); in other words, the DP is in crosslinguistic variation (Baker, 2003; Chierchia, 1998a, 1998b; Lyons, 1999). The central debate on the structure of NPs largely concerns languages without articles (i.e., the majority of Slavic and Asian languages).

Regarding noun phrases in article-less Slavic languages, there are two main positions in this respect. The first is the universal DP position, according to which the Slavic noun phrase is headed by a universal functional category Determiner (Pereltsvaig, 2007; Progovac, 1998; Rappaport, 1998, 2001). The second is the position of the parameterized DP that claims the DP projection is a parameter and there is no DP projection in Slavic nominals (Bošković, 2005, 2008; Trenkic, 2004, 2007; Zlatić, 1998).

From the perspective of second language (L2) acquisition, the universality of the DP bears important implications. If the DP is a universal category, learning properties of nominal phrases (i.e., meanings such as definiteness, specificity, etc.) should be easier since the learners’ L1 and L2 have the same underlying structure of NPs. If the DP is a parameter, L2 learners will face more challenges in acquiring properties of nominal phrases whether going from the first language (L1) with a DP to L2 without a DP or vice versa. Since the nominal structure in the learners’ L1 and in the L2 is radically
different, learners cannot make use of their L1 representation to acquire the NP structure in the L2. In the present study, the existence of the DP in an article-less language, Russian, is examined through an investigation of L2 acquisition of the feature [definite] encoded structurally in the functional category Determiner in Russian.

2. Definiteness

Although definiteness is a universal semantic property of all languages, it is not easy to characterize it. There are multiple definitions of the concept (see Lyons, 1999, p.253-281 for various definitions formulated by semanticists). Since the feature [definite] is discourse related, I will adopt Heim’s (1988, 1991) approach to incorporate pragmatic aspects (the knowledge of the speaker/hearer) into the semantics of definiteness in terms of familiarity. I will use the informal definition developed by Ionin (2004, p. 5) based on Heim (1991):

- If a Determiner Phrase (DP) of the form [D NP] is [+definite], then the speaker and hearer presuppose the existence of a unique individual in the set denoted by the NP.

Definiteness is encoded differently across languages. In languages with articles, definiteness is overtly by free from articles (e.g., a/the in English) or by bound form articles (mand-en,’man-the’ in Danish). In languages without overt articles (e.g., Russian, Polish, Czech, Serbian, Croatian, Korean, Japanese, etc), definiteness and indefiniteness can be expressed by word order (mal’chik spit,’(the) boy sleeps’; spit mal’chik ,’sleeps (a/the) boy’ in Russian) or by context/discourse.1 Those means (using demonstratives, changing word order) are, however, lexico-semantic and pragmatic properties rather than morphosyntactic. According to the Parameterized-DP position, this is evidence that definiteness is not grammaticalized; therefore, there is no DP in languages without overt articles. In this study, I argue that (in)definiteness is, in fact, grammaticalized in article-less languages by providing evidence from L2 acquisition in Russian.

3. Structural representation of [± definite] in Russian

As noted by Apresjan (1995), in Russian, the presence or absence of agreement between a noun and its modifier denoting possession encodes an indefinite or definite interpretation of the possessor. Possessor-modifiers that agree with their head nouns (i.e. adjectival modifiers) give an indefinite reading (e.g., ženskij’ golos (woman-adj. voice) ‘a woman’s voice’), whereas possessor-modifiers that do not agree with their head nouns (i.e. postnominal possessive genitive modifiers) are unmarked and can express either definiteness or indefiniteness (e.g., golos ženšiny (voice (of) woman-noun-gen) ‘a/the woman’s voice’). See examples from Apresjan (1995, p. 258):

(1) Za dverju slyšalsja ženskij’ golos
    Behind door hear-past-passive woman-adj-NOM voice-NOM
    ‘A woman’s voice was heard behind the door’.

(2) Za dverju slyšalsja golos ženšiny
    Behind door hear-past-passive voice-noun-NOM woman-noun-GEN
    ‘A/ The woman’s voice was heard behind the door’.

To the best of my knowledge, this phenomenon has not been examined in the literature in terms of the licensing of the feature [definite]. In this paper, I attempt to explain the phenomenon with a new and yet theoretically tenable approach built on Rappaport’s (1998) double headed DP analysis. According to Rappaport (1998), the DP projection is obligatory to explain both case assignment and the

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1 For an overview of how definiteness is marked crosslinguistically, see Lyons (1999, pp.62-89)
impossibility of extracting the noun *professora* (*professor*) from the noun phrase *redkix monet professora* (*rare coins of the professor*). See his examples as in (3)a-b.

(3) a. kollekcija redkix monet professora
Collection rare-GEN coins-GEN professor-GEN
'The collection of rare coins of the professor'
b. *kollekciija professora redkix monet
Collection professor-GEN rare-GEN coins-GEN
'*The collection of the professor of rare coins'

Building on Rappaport’s framework, I explain the licensing of the feature [definite]. My proposal is that the feature [possession] on the null D checks and values [uCase:gen] on the noun *ženšiny* (*woman*) and gives it a definite or indefinite reading, whereas the null D [default], with no requirement of a specific case, is interpreted as indefinite. See the illustration in Figure 1 in Appendix. Since the presence of the D has a direct contribution to the relationship between the modifier type and the [±definite] interpretation, I will rule out the possibility that nominals in Russian lack D (*in contra* Bošković, 2008, 2009).

4. Learning task and research questions
4.1. Learning task
L2 learners with an overt Determiner L1 must learn that the feature [possession] on null D checks and values [uCase:gen] on N and is interpreted as [±definite] while the null D [default] with no requirement of a specific case is interpreted as [–definite] in Russian. Table 1 (see Appendix) shows form-meaning mapping of this property. This is a 2x2 pattern of form-meaning mapping where one mapping is missing. The [-def] value can appear either with postnominal genitive or adjectival modifiers but the [+def] value only appears with genitive modifiers. In other words, learners will have very little positive evidence for this property. This poverty-of-stimulus (POS) knowledge of the [definite] feature is examined in the present study.²

4.2. Research Questions
Building on previous studies on the internal structure of NPs and research on L2 acquisition of nominal features, the following research questions emerge:
1) Can L1 English learners of Russian distinguish indefinite and definite interpretations for possessors denoted by adjectival and genitive modifiers and successfully reject the [+definite] interpretation for the possessor denoted by adjectival modifiers?
2) Are there any differences among native, superior-level and intermediate-level groups?

5. Methodology
5.1. Participants
Participants of the study include 14 native Russian speakers as controls and 15 intermediate-level and 9 superior-level learners of Russian. The controls have lived in the US for a period of 2-8 years. The intermediate level Russian learners had studied Russian for 2-3 years and none of them had been to a Russian-speaking country at the time of testing. The superior-level learners have a graduate degree in Russian, passed the ACTFL Russian oral/written proficiency test at a “superior” level, and have lived in a Russian-speaking country for at least 2 years.

² As to whether the property is explicitly taught in the classroom or not, I have reviewed a number of Russian textbooks and informally asked Russian language instructors. I have learned that this property is not taught in the classroom (not mentioned in any of the textbooks I have reviewed) and, in fact, most instructors (including Russian speaking instructors) were not even aware of [definite] property and modifier types.
5.2. Test design
A contextualized acceptability judgment task was used (8 token items and 6 fillers) for the experiment. The subjects read short passages (in English) and rated the target sentences (in Russian) as (un)acceptable descriptions of the stories on a 5-point scale ranging from “completely unacceptable/unnatural” to “completely acceptable/natural”.

Sample test items (1-completely unacceptable/unnatural, 5-acceptable/very natural)
Condition A: contexts with an indefinite interpretation (n=4)

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4) I was in the movie theater last night to see a horror movie. I didn’t think the movie was scary but some women behind me kept screaming. It was so annoying that I had to leave before the end of the movie.</td>
<td>Ja ušla iz kinoteatra iz-za ženskix krikov. I left from theater for women-ADJ.-GEN screams-NOUN-GEN. ‘I left the theater because of some women screaming.’</td>
<td>[-def] [1,2,3,4,5]</td>
</tr>
<tr>
<td>a.</td>
<td>Ja ušla iz kinoteatra iz-za ženskix krikov. I left from theater for women-ADJ.-GEN screams-NOUN-GEN. ‘I left the theater because of some women screaming.’</td>
<td>[-def] [1,2,3,4,5]</td>
</tr>
<tr>
<td>b.</td>
<td>Ja ušla iz kinoteatra iz-za krikov ženšin. I left from theater for screams-NOUN-GEN women-NOUN-GEN. ‘I left the theater because of some/the women screaming.’</td>
<td>[±def] [1,2,3,4,5]</td>
</tr>
</tbody>
</table>

Condition A: contexts with a definite interpretation
(5) Tatiana has three children. They wanted toys for Christmas. So, Tatiana took them to the biggest toy store in Moscow. When the kids couldn’t find toys they wanted at the store, all three kids started crying. Tatiana got upset and decided not to get them anything.

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
<th>Rating</th>
</tr>
</thead>
</table>

In example (4), learners should accept both sentences (a) and (b) or accept only (a). If they reject (a) and accept only (b), the answer was considered incorrect. The logic behind this is that if the learner gets an indefinite reading from (4b) which can be both indefinite and definite but does not get an indefinite interpretation from (4a) which only has an indefinite reading, the learner has not acquired the property and her performance can be based on a random guess. In the context of example (5), learners should reject the sentence (a) and accept the sentence (b) because (5a) cannot have a definite reading in the context of the story.

6. Findings
Group results show that the superior-level L2 group demonstrated target-like knowledge on both indefinite reading for adjectival modifiers (4.67 out of 5.0) and [±definite] for genitive modifiers (4.55 out of 5.0). There is no significant statistical difference between the native and superior L2 groups across all conditions. Although the intermediate-level L2 group demonstrated native-like knowledge on the indefinite reading of adjectival modifiers (4.45 out of 5.0) in the contexts with an indefinite interpretation, the group is significantly different from the native and superior L2 groups elsewhere. See intergroup comparisons in Table in Appendix.

Individual results show that all the learners (even the intermediate ones) demonstrated at least 75% of accuracy with the [-definite] interpretation, while only two (out of 15) from the intermediate level group had 75% accuracy on recognizing the [+definite] interpretation. Both group and individual results demonstrate that intermediate-level L2 learners could successfully recognize the [-definite]
interpretation of adjectival modifiers, while they had difficulty recognizing possibility of the [+definite] interpretation of genitive modifiers. Superior-level L2 learners, on the other hand, demonstrated native-like competence in distinguishing in/definite interpretation of both types of modifiers.

7. Conclusions
In light of previous research which supports the claim that NPs in article-less languages project the DP as they do in languages with overt articles (see Pereltsvaig, 2007; Progovac, 1998; Rappaport, 1998, 2001, among others), the present study provides another piece of evidence for the universality of DP through an investigation of L2 acquisition of definiteness in Russian by English speakers.

As we have seen in the present study, English-speaking L2 learners (at the superior level) indeed acquired the covertly expressed [definite] feature in Russian. There was no significant difference between the native controls and the superior-level learners (see Table 3). The particular property examined in this study is underdetermined in the learners’ L1 English and in L2 instruction, which means that learners cannot transfer their L1 knowledge into their L2 or acquire the knowledge from instruction. Moreover, as seen in the 2x2 design (see Table 1), one mapping is missing in the form-meaning mapping of the property. This means that learners get very little positive evidence. These conditions make the indefinite and definite interpretations of modifier types in Russian to be poverty-of-stimulus knowledge. Thus, the successful L2 acquisition of the feature [definite] has to be constrained by Universal Grammar. This constitutes strong evidence that the [definite] feature is encoded in a universal category, which is a functional category Determiner; therefore, Russian has the DP projection. These findings of the study would shed light on the much-debated issue of the NP-structure in languages without overt articles.

References
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Bošković, Željko. 2008. What will you have, DP or NP? Proceedings of NELS 37.


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Appendix

Figure 1. The double DP analysis of kollekcija redkich monet professor ‘collection of rare coins of the professor’ (Rappaport, 1998)
Figure 2. Structural illustration of postnominal genitive modifiers

Figure 3. Structural illustration of adjectival modifiers

Table 1. The 2x2 design of form-meaning mapping

<table>
<thead>
<tr>
<th>Adjectival modifier</th>
<th>[-def]</th>
<th>[+def]</th>
</tr>
</thead>
<tbody>
<tr>
<td>żenskij g prolonged</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>ženskij g</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>
Table 2. Mean responses to indefinite and definite interpretations (from 1 to 5)

<table>
<thead>
<tr>
<th></th>
<th>Condition A</th>
<th>Condition B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjectival modifier</td>
<td>Genitive modifier</td>
</tr>
<tr>
<td></td>
<td>[−def]</td>
<td>[±def]</td>
</tr>
<tr>
<td></td>
<td>Adjectival modifier</td>
<td>Genitive modifier</td>
</tr>
<tr>
<td></td>
<td>[−def]</td>
<td>[±def]</td>
</tr>
<tr>
<td>Native controls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=17)</td>
<td>4.84</td>
<td>1.71</td>
</tr>
<tr>
<td>Superior level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>learners (n=9)</td>
<td>4.67</td>
<td>1.83</td>
</tr>
<tr>
<td>Intermediate level learners (n=15)</td>
<td>4.45</td>
<td>3.07</td>
</tr>
</tbody>
</table>

Table 3. Intergroup comparisons. Tukey HSD (α=0.01)

<table>
<thead>
<tr>
<th></th>
<th>Condition A</th>
<th>Condition A</th>
<th>Condition B</th>
<th>Condition B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native vs. Superior L2</td>
<td>n/s</td>
<td>n/s</td>
<td>n/s</td>
<td></td>
</tr>
<tr>
<td>Native vs. Intermediate L2</td>
<td>n/s</td>
<td>*p&lt;0.0001</td>
<td>*&lt;0.0002</td>
<td></td>
</tr>
<tr>
<td>Superior vs. Intermediate</td>
<td>n/s</td>
<td>n/s</td>
<td>*p&lt;0.0001</td>
<td>*p&lt;0.0002</td>
</tr>
</tbody>
</table>

n/s= not significant
* =significant