Abstract
This study investigates linguistic development of bilingual children in Cyprus, specifically with respect to object clitic production. Twenty-three Russian–Cypriot Greek (CG) simultaneous bilingual children took part in the study. Greek oral production data, obtained via elicited story-telling (Tsimpli et al. 2007), was recorded, transcribed and analysed in terms of object clitic (non)target production/omission and relevant features such as gender, case, number and person. The analysis of the data showed that the linguistic development of bilingual children is influenced by the quantity and quality of input and their linguistic environment as well as by their mothers’ linguistic profile and background.

Keywords: object clitics, (un)interpretable features, bilingualism, language acquisition

1. Introduction
The focus of the study is the linguistic development of bilingual children in Cyprus, specifically with respect to object clitic production and placement, the role of L1 transfer and (un)interpretable features in bilingual child L1/L2 acquisition.

Linguistic situation in Cyprus can be described as diglossic, bi-dialectal (Grohmann & Leivada 2011) or bilectal (Rowe & Grohmann 2013). Two varieties are used by the Greek Cypriot population: Standard Modern Greek (SMG) and Cypriot Greek (CG). This situation can be also described as multilingualism, as different language minorities and speakers of other languages live in Cyprus: Cypriot citizens/nationals of a different ethnic/religious background (e.g., Latin, Maronites), residents of British origin, and immigrants from various countries of Eastern Europe, Asia, and especially the former Soviet Union.

The Russian-speaking community is the largest foreign language group in Cyprus with around 50,000 permanent residents and about 150,000 tourists who come to visit Cyprus every year. There are three main types of Russian-speaking populations in Cyprus: temporary residents (tourists or business people who use mainly Russian at home and Russian or English or some other European language on a daily basis — but not Greek); members of mixed marriage families (mainly families where the husband
is Greek Cypriot, the wife is Russian and the children are bilingual); members of immigrant families (where mostly both partners are Russian, who aim for long-term residence in Cyprus, so they speak Russian at home and English or Greek outside) (Karpava 2015). The bilingual children who participated in this study belong to the second type of families.

This study is an attempt to investigate the causes of non-target production, whether it is impairment of grammatical representations (the Interpretability Hypothesis), cross-linguistic transfer (lexical, morphological and syntactic) or other variables, such as age, schooling, proficiency, quantity and quality of input and their linguistic environment.

The paper is organised as follows: Section 2 provides an overview of L2 acquisition of object clitics in Greek and possible transfer from L1 Russian. Section 3 deals with the research questions and the methodology of the study. In Section 4 the analysis of the narrative oral production is presented. The results are discussed in section 5. Section 5 concludes and offers the interpretation of the results.

2. Clitics in Greek

Clitics are associated with syntax-discourse interface (Sorace 2003), syntax-morphology interface (Arche & Dominguez 2011; Mavrogiorgios 2007) and express given (old) information in discourse (Ariel 1990; Cardinaletti & Starke 1999; Tedeschi 2009). Clitics have uninterpretable features of agreement and case (Tsimpli & Stavrakaki 1999), 3rd person object clitics have only uninterpretable features, 1st and 2nd person object clitics have interpretable features of person (Tsimpli & Mastropavlou 2007).

In SMG proclisis is associated with indicative verbs and enclisis with imperatives or gerunds (Chatzikyriakidis 2012). In CG (Tobler-Mussafia language) clitics are banned from clause-initial position (mixed clitic position): if wh-elements, negation, modal, tense particles, conditional, temporal subordination conjunctions and factive complementiser pu appear in the left periphery then CG allows proclisis in indicative environments, otherwise it is enclisis (Chatzikyriakidis 2012; Terzi 1999). Enclisis in CG requires V-to-C movement (Agouraki 2001): all CG verbs move to C, if V-to-C movement is blocked by wh-phrases, focus or topic, then clitics are in situ and this leads to proclisis. Terzi (1999) explained it by V-to-M movement.
2.1 L2 Acquisition of Greek clitics

Previous research on the acquisition of clitics by adult learners of L2 Greek showed better production for 1\textsuperscript{st}/2\textsuperscript{nd} person clitics than for 3\textsuperscript{rd} person clitics (Tsimpli 2003; Tsimpli & Sorace 2006). L2 learners of Greek with L1 Turkish and Russian background, with no formal instruction in L2 Greek and around nine years of exposure to natural L2 Greek input, had a higher rate of omission for the 3\textsuperscript{rd} person clitics than for the indefinite articles and the 1\textsuperscript{st}/2\textsuperscript{nd} person clitics in their oral production, interviews (Tsimpli 2003). The Interpretability Hypothesis is confirmed: uninterpretable features are not accessible in L2 grammar (Clahsen & Muysken 1986; Hawkins 1998; Tsimpli & Roussou 1991). L2 learners try to assign interpretable features to the elements with uninterpretable features.

Chondrogianni (2005) looked into the acquisition of clitics and determiners by child L2 learners of Greek (ages 7-12) with L1 Turkish background. It was found that children had more learning difficulties with clitics than determiners. It took them longer to acquire 3\textsuperscript{rd} person object clitics. Omission, errors of gender and number could be affected by discourse, the locality of the dependencies and complexity in computation of object clitics.

The study by Karpava and Grohmann (2014) investigated the acquisition of object clitics by bilingual Russian–CG children. It was based on the elicitation tasks: Clitic-in-Islands tool, developed in Action A33 (Varlokosta et al. 2016), focused on the 3\textsuperscript{rd} person singular accusative object clitics within a because-clause island, and the Production Probe for Pronoun Clitics (PPPC) tool (Tuller et al. 2011) that aimed to elicit verb–clitic responses to \textit{wh}-questions.

It was found that syntactic environment affects object clitic production as the first task elicited more overt clitics and fewer clitic omission than the second task. The analysis of the data showed that bilingual children transfer from L1 Russian and misanalyse clitics in CG as weak pronouns which leads to clitic omission, especially in the specific reference contexts of the answer to \textit{wh}-question. With respect to clitic placement there was revealed a developmental pattern, increase in the use of proclisis and decrease in the use of enclisis with age and more schooling input and exposure to SMG. Regarding the Clitic-in-Islands elicitation task, it was found that bilingual children lag behind their monolingual CG peers and adults with respect to object clitic production and enclisis.

According to the Interpretability Hypothesis, UG is only partially available,
mediated by L1. L2 representations for narrow syntax are impaired (Impaired Representation Hypothesis) (Hawkins & Chan 1997; Tsimpli 2003; Tsimpli & Roussou 1991). Uninterpretable features not instantiated in L1 cannot be acquired in L2 due to critical period and maturational constraints. Interpretable features can be learned in L2 due to UG access (Hawkins & Hattori 2006; Tsimpli & Dimitrakopoulou 2007). There is variability/optionality in L2 with the elements that involve uninterpretable features which lead to the impossibility to reach native-like competence.

Given that Russian has no clitics, if Russian–CG bilinguals transfer from L1 Russian, they will omit object clitics in obligatory contexts, and because of the characteristics of the (un)interpretable features, 3rd person clitics will be omitted more often than 1st and 2nd person clitics, as the latter have interpretable animate features (Tsimpli & Dimitrakopoulou 2007). They could misanalyse clitics as weak pronouns and omit them because of the influence of L1 transfer from Russian or tend to use nouns instead of object clitics to express old/given discourse information (Erteschik-Shir, Ibnbari & Taube 2013; McShane 2005).

2.2 Transfer from L1 Russian

Table 1 shows the difference between Greek and Russian in nominal and verbal domains.

<table>
<thead>
<tr>
<th>Greek (determiners, clitics)</th>
<th>Russian (no determiners, no clitics)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal domain agreement</strong></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>feminine, masculine, neuter</td>
</tr>
<tr>
<td>Case</td>
<td>nominative, accusative and genitive</td>
</tr>
<tr>
<td>Number</td>
<td>realised on nouns, adjectives, and determiners</td>
</tr>
<tr>
<td>Person</td>
<td>(1st, 2nd, 3rd), in particular on pronominal clitics</td>
</tr>
<tr>
<td><strong>Verbal domain agreement</strong></td>
<td></td>
</tr>
<tr>
<td>Person</td>
<td>person, number, (gender only in the past tense)</td>
</tr>
</tbody>
</table>

*Table 1: Greek vs. Russian: Nominal and verbal domains*
In Russian, object drop is possible in the contexts with specific reference for the null object. L2 learners can transfer this object drop to L2, they might misanalyse object clitics as weak pronouns. Object drop in L1 Russian is continued (discourse) topic drop: missing objects are unvalued feature bundles (phi-features) that get their valuation from discourse PF interface. Object drop is not allowed in the presence of an overt subject, unless the subject is focused (Erteschik-Shir, Ibnbari & Taube 2013). In Russian case is lexical, while in Greek it is structural (Kowaluk 2001).

It could be predicted that due to the absence of pronominal clitics in Russian this might lead to difficulties in L2 acquisition of Greek object clitics. L2 learners might transfer from L1 Russian and have non-target production of object clitics, omissions and substitutions. Third person object clitics are expected to be omitted more than 1st and 2nd person clitics as the latter have interpretable person feature.

3. Study

3.1 Research questions

The main research questions of this study are the following:

1. Do bilingual children omit object clitics, produce overt object clitics or substitute them with full DPs?
2. Is their (non)target performance explained by L1 transfer from Russian or inability to learn uninterpretable features?
3. What role do variables such as age, schooling and level of proficiency play in bilingual children’s object clitic performance?

3.2 Participants

Twenty-three simultaneous Russian–Cypriot Greek bilingual children participated in the study. The sample of the participants was gender-balanced: 11 boys and 12 girls, born in Cyprus (father CG and mother Russian). Their age ranges from 3;1 to 8;4 and they attend pre-primary and primary school in Larnaca area: urban (11) and rural (12).

The participants are Russian–speaking CG children; they can be described a) as bilinguals as they have both Russian and CG in their linguistic repertoire, b) as bidialectals as they use both CG and SMG in their daily lives, c) as trilinguals as they speak Russian, CG and SMG, or even d) as multilinguals as some of their parents, besides Russian use either other varieties of Russian or other languages, such as
Ukrainian, Belarussian, Georgian, or Kazakh at home with their children.

### 3.3 Materials/Procedure

The participants were tested on the Developmental Verbal IQ Test (DVIQ), slightly adapted to CG from Stavrakaki and Tsimpli’s (2000) SMG original and the Russian Proficiency Test for Multilingual Children (RPTMC) (Gagarina, Klasser & Topaj 2010). Besides the tests, a detailed questionnaire (filled by the parents) on language input situation, linguistic and extra-linguistic development of a child was used (Gagarina, Klasser & Topaj 2010).

Both the DVIQ and the RPTMC tests assess proficiency in Greek and Russian respectively. Greek oral production data, obtained via elicited story-telling while describing eight sets of pictures and two instruction-giving tasks (Tsimpli et al. 2007), was recorded, transcribed and analysed in terms of object clitic (non)target production/omission, placement and relevant features such as gender, case, number and person.

The participants were tested individually at their home place after the permission had been obtained from their parents and the consent form had been signed. There was one week between testing in Russian and in CG.

Snowball sampling was implemented as it was hard to find simultaneous Russian–CG bilingual children in Cyprus. First, the potential subjects and their parents had been identified by the researcher through Russian cultural centres and Russian Saturday schools. Then Russian families helped to find other participants who would be willing to take part in the research.

### 4. Results

The analysis of oral data showed that 23 bilingual children produced 9,664 words and 1,543 utterances, with a mean length of utterance (MLU/words) 6.26. The data was analysed in terms of object clitic production/omission and placement, morphological agreement, locality of agreement and relevant features: gender, case, number and person.

#### 4.1 Object clitic production

Overall, the analysis of the data showed that bilingual Russian-speaking CG children produced nearly the same number of overt object clitics, and overt object DPs, while
the rate of the object clitic omission was low. They could misanalyse the clitics as weak pronouns and omit them because of L1 transfer from Russian or tend to use nouns instead of object clitics to express old/given discourse information (Erteschik-Shir, Ibnbari & Taube 2013; McShane 2005), as Table 2 illustrates:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overt object DPs</td>
<td>328</td>
<td>46.52%</td>
</tr>
<tr>
<td>Overt object pronouns</td>
<td>13</td>
<td>1.84%</td>
</tr>
<tr>
<td>Overt object clitics</td>
<td>304</td>
<td>43.42%</td>
</tr>
<tr>
<td>Omitted object clitics</td>
<td>58</td>
<td>8.22%</td>
</tr>
</tbody>
</table>

Table 2: Object clitic production, overt object DPs and overt object pronouns

Object clitic omission is presented in example 1. The use of full DP is shown in example 2.

(1) …enas kleftis… meta i astinomia ethele na *(ton) piiasi …a thief MASC.3SG.NOM. then the police wanted to *(CL-MASC.3SG.ACC.) take ke etrekse ke meta ide taksi gia na figi and he ran away and then saw a taxi in order to escape… ‘There was a thief and then the policemen wanted to catch him and they rushed after him, but the thief saw the taxi and wanted to escape.’

(2) Mia fora ke ena kero zuse ena koritsi, ena agori ke mia mama
Once upon a time lived a girl a boy and a mother
ipe tha kanis ta mathimata su na pekssis
a mother said you will do your lessons-NEUT.3PL.ACC. you will play
me tin adelfi… ke ekamne ta mathimata
with the sister… and he did the lessons-NEUT.3PL.ACC.
‘Once upon a time there were a girl, a boy and their mother. The mother told the boy first to do his lessons in order to play with his sister and he did his lessons.’

4.2 Transfer from L1 Russian
Bilingual children may have omitted object clitics due to transfer from L1 Russian: object drop (topic drop). Object drop is not allowed in the presence of overt subject. Bilingual children used overt subjects with overt object clitics and null subjects with omitted object clitics, as is illustrated in Figure 1 below:
In Russian, the direct object ellipsis in subordinate structure is possible when the order is: main clause + subordinate clause with temporal conjunctions and such conjunctions as čtoby ‘to’ dlja togo čtoby ‘in order to’ (relevant to subjunctive clauses in Greek), but if the clause order is subordinate clause + main clause then direct object ellipsis is blocked (McShane 2005). L2 learners of Greek might transfer from L1 Russian and omit L2 Greek object clitics in subjunctive clauses in the same way as they omit direct objects in the relevant clauses in L1 Russian.

The distribution of overt and omitted clitics in different types of syntactic environments, type of clauses (negative, indicative, subjunctive, imperative, giati (because), pu (which/that), oti (that) and tha (will/future) clauses) is shown in Table 3. Bilingual children mainly omit object clitics in indicative, negative and subjunctive clauses.

<table>
<thead>
<tr>
<th>Object clitics</th>
<th>Negative giati-clause</th>
<th>Indicative giati-clause</th>
<th>Subjunctive giati-clause</th>
<th>Imperative giati-clause</th>
<th>Overt pu-clause</th>
<th>Omitted pu-clause</th>
<th>Overt oti-clause</th>
<th>Omitted oti-clause</th>
<th>Overt tha-clause</th>
<th>Omitted tha-clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overt</td>
<td>27 (7.45%)</td>
<td>200 (55.24%)</td>
<td>2 (0.55%)</td>
<td>54 (14.91%)</td>
<td>7 (1.93%)</td>
<td>2 (0.55%)</td>
<td>3 (0.82%)</td>
<td>9 (2.48%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Omitted</td>
<td>9 (2.48%)</td>
<td>41 (11.32%)</td>
<td>1 (0.275)</td>
<td>7 (1.93%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Syntactic environments of object clitics

Direct objects with configurational accusative case marking are the most common type of potential elided categories in Russian. The antecedents in this case are direct objects with the same configurational accusative case marking (McShane 2005). The distance between the antecedent and the ellipsis is one clause, meaning that the clause with the antecedent directly precedes the elided object and thus they are syntactically
available. Bilingual children might transfer from L1 Russian and misanalyse L2 Greek object clitics as direct objects, thus, the most frequent distance between omitted object clitic and its antecedent is one clause, as is clearly depicted in Table 4 below:

<table>
<thead>
<tr>
<th>Object clitic</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular</td>
<td>Plural</td>
<td>Singular</td>
</tr>
<tr>
<td>Omission</td>
<td>58</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>15.51%</td>
<td>3.44%</td>
<td>20.68%</td>
</tr>
<tr>
<td>Overt pre-verbal</td>
<td>235</td>
<td>73</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>31.06%</td>
<td>4.25%</td>
<td>13.19%</td>
</tr>
<tr>
<td>Overt post-verbal</td>
<td>29</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>34.48%</td>
<td>3.44%</td>
<td>13.79%</td>
</tr>
</tbody>
</table>

Table 4: Object clitic production: Case, gender, number

4.3 Proclisis vs. Enclisis

The analysis of the data in terms of clitic placement showed that in indicative clauses bilingual children tend to use pre-verbal rather than post-verbal object clitics. At school, children are exposed to Standard Modern Greek (SMG), which opts for pre-verbal object clitic position in indicative clauses. At home, they have Russian and SMG input from their mothers, who have a negative attitude towards the CG variety (Karpava 2015) and CG input from their fathers. In CG object clitics are located post-verbally in indicative clauses. It was also found that CG index (the number of CG words/total number of words in each child’s speech sample) is statistically significant for post-verbal clitic production. The syntactic environments of overt object clitics, proclisis and enclisis are presented in Table 5 below:

<table>
<thead>
<tr>
<th>Object clitics</th>
<th>Negative</th>
<th>Indicative</th>
<th>giatí -clause</th>
<th>Subjunctive</th>
<th>pu-clause</th>
<th>Imperative</th>
<th>oti-clause</th>
<th>tha-clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overt proclisis</td>
<td>27</td>
<td>172</td>
<td>2</td>
<td>52</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>10.07%</td>
<td>64.17%</td>
<td>0.74%</td>
<td>19.45%</td>
<td>2.23%</td>
<td>0%</td>
<td>1.11%</td>
<td>2.23%</td>
</tr>
<tr>
<td>Overt enclisis</td>
<td>0</td>
<td>26</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>76.47%</td>
<td>0%</td>
<td>5.88%</td>
<td>2.95%</td>
<td>5.88%</td>
<td>0%</td>
<td>8.82%</td>
</tr>
</tbody>
</table>

Table 5: Syntactic environments of overt object clitics: Proclisis/enclisis
Example 3 shows the use of pre-verbal clitics in indicative clauses.

(3) Mia mera pige se ena katastima pu ihe andrika ruha
One day she went to a shop that had men’s clothes
ke meta dialekse ekino to prasino kormaki ke to agorase
and then she chose that the green t-shirt and it-NEUT.3SG.ACC. she bought
‘One day the woman went to a shop with men’s clothes and she chose a green t-shirt and bought it.’

The use of post-verbal clitics in indicative clauses is presented in example 4.

(4) Ena agoraki epiase ena hartoeto ke to koritsi epiase to
A boy took a kite-MASC.3SG.ACC. and the girl took it-NEUT.3SG.ACC.
‘A boy took a kite and the girl took it.’

It was found that bilingual Russian–CG children omitted mainly 3rd person object clitics of neuter gender. The main problem in agreement (between object clitic and its antecedent) was gender, mainly due to L1 interference. This can be the evidence in support of the Interpretability Hypothesis (Tsimli & Dimitrakopoulou 2007), as Table 6 demonstrates:

<table>
<thead>
<tr>
<th>Agreement errors</th>
<th>masculine instead of neuter</th>
<th>neuter instead of feminine</th>
<th>feminine instead of masculine</th>
<th>feminine instead of neuter</th>
<th>Same clause</th>
<th>One clause</th>
<th>Two or more clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-verbal</td>
<td>40</td>
<td>1</td>
<td>13</td>
<td>2</td>
<td>20</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>post-verbal</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 6: Agreement errors

Age, schooling and language proficiency factors are crucial for object clitic production/omission. Primary school children and the children with higher scores of DVIQ omit fewer object clitics and have a lower rate of post-verbal object clitic production than pre-primary, kindergarten children and the children with low scores of DVIQ. This support the Socio-Syntax of Development Hypothesis (Grohmann 2011) (see Figures 2-4 below):
Object clitic production by simultaneous Russian-Cypriot Greek bilinguals

Figure 2: Object clitic production and age variable

Figure 3: Object clitic production and school variable

Figure 4: Object clitic production and DVIQ scores variable
Regarding the narrative oral production task, bilingual children performed better than their L2 adult mothers (Karpava 2015), they had more overt object clitics and fewer DPs, but they had more object clitic omissions, as Figure 5 shows:

Figure 5: Object clitic production by bilingual children and their mothers, L2 learners of Greek

A paired-samples t-test indicated that scores were significantly higher: a) for the overt object clitics ($M = 13.3, SD = 8.82$) than for omitted object clitics ($M = 2.5, SD = 2.52$), $t(22) = 4.87, p < .001, d = 1.66$, and b) for the pre-verbal object clitics ($M = 11.8, SD = 8.65$) than post-verbal object clitics ($M = 1.4, SD = 2.25$), $t(22) = 5.48, p < .001, d = 1.63$.

Analyses of variance showed a main effect of a) age on object clitic omission, $F_{1,22} = 6.98, p = .007, \eta^2_p = .93$; b) proficiency level, DVIQ scores on object clitic omission, $F_{1,22} = 18.41, p < .001, \eta^2_p = .98$; c) CG index (the number of CG words/total number of words in each child’s speech sample) on post-verbal object clitic production, $F_{1,22} = 2.79, p = .048, \eta^2_p = .69$; d) schooling factor on object clitic omission, $F_{1,22} = 7.35, p = .004, \eta^2_p = .42$; e) mother’s age of onset (AoO) to CG on bilingual children’s object clitic omission, $F_{1,22} = 2.81, p = .045, \eta^2_p = .66$ and overt post-verbal object clitics, $F_{1,22} = 3.96, p = .013, \eta^2_p = .73$; f) mother’s level of education on children’s object clitic omission, $F_{1,22} = 5.08, p = .016, \eta^2_p = .33$ and overt post-verbal object clitics production, $F_{1,22} = 4.482, p = .025, \eta^2_p = .31$. 
4. Discussion

The analysis of the data showed that bilingual children had low rate of object clitic omission. They either used overt object clitics or full DPs. The omission of object clitics was affected by syntactic environment, presence or absence of overt subject in the sentence. This could be due to L1 transfer as in Russian object drop is allowed with null subject. Bilingual children had object clitic omission mainly in subjunctive and indicative clauses, with null subject in the sentence. The most frequent distance between omitted object clitic and its antecedent was one clause.

Low level of L1 transfer from Russian can be explained by language dominance effect. Bilingual children have more exposure to Greek, CG at home (their fathers and CG relatives) and SMG at school. They attend Russian lessons only once per week on Saturdays and they use Russian only with their mothers or Russian-speaking friends. As their schooling is in SMG this leads to the predominant pre-verbal clitic placement in indicative clauses. Besides, their mothers, L2 learners of Greek have a negative attitude towards CG and they try to use only SMG with their families.

CG index, the number of CG words per total number of words in each child’s speech sample is correlated with the use of enclisis in indicative clauses. Bilingual children used proclisis mainly in indicative, subjunctive and negative clauses, while they placed object clitic post-verbally predominantly in indicative clauses.

Bilingual children mostly omitted 3rd person object clitic. Gender was the most vulnerable feature for the non-target object clitic production, agreement between object clitic and its antecedent. This finding is in line with the Interpretability Hypothesis (Tsimpli & Dimitrakopoulou 2007).

It was found that age, schooling and language proficiency affect (non)target object clitic production and clitic placement. It should be noted that the input that bilingual children receive from their mothers (both in Russian and SMG/CG) affects their L2 CG production. In comparison to their mothers, bilingual children had better performance with respect to overt object clitics, they had less DP substitutions, but higher rate of clitic omission than their mothers, while their mothers, L2 learners of Greek, tended to substitute clitics by DPs.

The number of the participants in this study is not high, thus it is difficult to generalise the results, though some interesting patterns have been observed. L2 grammar of bilingual children is developing, there is optionality in their use of overt
object clitics and full DP substitutions, they try to use compensatory strategies and assign interpretable features to uninterpretable features.

5. Conclusion

This study investigated linguistic development of bilingual children in Cyprus, specifically with respect to object clitic production. Overall, the analysis of the data showed that bilingual Russian–CG children had a low clitic omission rate, but they had quite a high rate of full DPs production, nearly the same as overt object clitics. The results of the data analysis support the Interpretability Hypothesis (Tsimpli & Dimitrakopoulou 2007) as bilingual children omit mainly 3rd person object clitics and gender was the main problem in agreement between object clitic and its antecedent. They transfer from L1 Russian and tend to use DPs instead of object clitics to express old/given discourse information (Erteschik-Shir, Ibnbari & Taube 2013; McShane 2005); they omit object clitics in subjunctive and indicative clauses and the distance between the antecedent and the ellipsis is one clause.

Schooling and language proficiency factors are crucial for object clitic production/omission. Primary school children and the children with higher scores of DVIQ omit fewer object clitics and have a lower rate of post-verbal object clitic production than pre-primary, kindergarten children and the children with low scores of DVIQ. At school, children are exposed to Standard Modern Greek (SMG), which opts for pre-verbal object clitic position in root clause. At home, they have Russian and SMG input from their mothers (who have a negative attitude towards the CG variety) and CG input from their fathers. In CG object clitics are located post-verbally in root clause. It was also found that CG index (the number of CG words/total number of words in each child’s speech sample) is significant for post-verbal clitic production.

Bilingual children performed better than their mothers, L2 learners of Greek, who were tested on the same tool and produced more DPs than overt object clitics or object clitic omissions.

In general, the results of the study suggest that the linguistic development of bilingual children (whether it is SMG-like, CG-like or whether they transfer from Russian) is influenced by the quantity and quality of input and their linguistic environment as well as by their mothers’ linguistic profile and background.

Further research is needed, oral, written production and elicitation, on-line and off-line, with a larger sample of the participants, both bilingual children and L2 adults, in
order to investigate the development of L2 grammar, cross-linguistic interference and learnability of (un)interpretable features.

References


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