Acquiring clitics and determiners in child L2 Modern Greek

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Abstract

The present paper explores the acquisition of third person direct object clitics and definite determiners by Turkish-speaking child L2 learners of Modern Greek. 66 Turkish-speaking children aged 7-12 and of five different proficiency levels were administered three tasks, in order to test the production of object clitics and the definite determiner. Furthermore, the production of phi-features and case was controlled for. Preliminary results show an initial omission of the two D-elements, but a later differentiation in their acquisition pattern, as clitic drop remains robust until later stages of acquisition. At the same time a hierarchical acquisition pattern of uninterpretable features is found (case, number>gender).

Keywords: child L2 acquisition, clitics, determiners, (un)interpretable features

1. Introduction

Child second language acquisition (L2A) has traditionally been treated in the literature as parallel to first language acquisition (L1A) with respect to UG access and the developmental path followed (Epstein et al. 1996). Recent studies (Schwartz 2003) have challenged this view by providing evidence that L1 properties are present at the initial stage of child L2A, as in adult L2A, and that the developmental sequence in child L2A can indeed be different than in L1A.

In the present paper the acquisition of morphologically non-overt L1 categories and features by child L2 learners is examined. The findings are discussed in the light of L2A theories within the Minimalist Programme (MP) (Chomsky 1995, 2001 onwards) that place the burden of learnability on feature interpretability.

2. Determiners and pronominal elements in Greek and Turkish

2.1 Determiners in Modern Greek

Modern Greek has a definite and an indefinite determiner. The definite determiner inflects for case, number and gender (Table 1) and agrees in phi-feature specification with the head noun.

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The definite determiner is obligatory with singular, plural count nouns and proper names in argument positions. Bare plurals and bare singular count nouns are only allowed in lexically governed positions or in a pragmatically marked environment (see Marinis 2003 and references therein). Its presence in such contexts provides support to the claim that the definite determiner in Modern Greek is not always contentful (cf. Longobardi 1994; Vergnaud & Zubizaretta 1992 for crosslinguistic data), but it rather has an expletive use and serves as a mere spell-out of uninterpretable phi-features (agreement) within the noun phrase (Karanassios 1992; Tsimpli & Stavrakaki 1999). Thus, in the structure below the definite determiner is generated in the AgrP position and is specified for phi-features and case but not for definiteness.

\[
\text{[DP Spec [D` D_to [AgrP Spec [Agr` Agr_to [NP Spec [N` N_spiti XP]]]]]]}
\]

For the definite determiner to get the definiteness specification it has to move to the D head (or the Def head projected over DP according to Tsimpli & Stavrakaki o.p.), when this is not occupied by the demonstrative pronoun, in which case movement to D^0 is not needed since the latter encodes definiteness and can check the feature on its own.

### Table 1. The definite determiner in Modern Greek

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Singular</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominative</td>
<td>o</td>
<td>i</td>
<td>to</td>
</tr>
<tr>
<td>Accusative</td>
<td>to(n)</td>
<td>ti(n)</td>
<td>to</td>
</tr>
<tr>
<td>Genitive</td>
<td>tu</td>
<td>tis</td>
<td>tu</td>
</tr>
<tr>
<td><strong>Plural</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominative</td>
<td>i</td>
<td>i</td>
<td>ta</td>
</tr>
<tr>
<td>Accusative</td>
<td>tus</td>
<td>tis</td>
<td>ta</td>
</tr>
<tr>
<td>Genitive</td>
<td>ton</td>
<td>ton</td>
<td>ton</td>
</tr>
</tbody>
</table>

Modern Greek has both strong and clitic pronouns (Cardinalletti & Starke 1999). Clitics in Modern Greek display most of the properties of deficient elements, that is, they are adjacent to V with an obligatory presence of the verb, cannot be modified, are unstressed, cannot enter conjunctions and have a fixed and special order.

The morphophonological similarity between clitics and determiners attested in Tables 1 & 2 has also provided evidence for their structural similarity (Uriagereka 1995). It is thus argued that third person direct object clitics are also a spell-out of phi-features (Tsimpli & Stavrakaki 1999), namely, person, number, gender and case.
Table 2. Third person direct object clitics in Modern Greek

<table>
<thead>
<tr>
<th>3rd Person clitic</th>
<th>Singular</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accusative</td>
<td>to(n)</td>
<td>ti(n)</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>Genitive</td>
<td>tu</td>
<td>tis</td>
<td>tu</td>
<td></td>
</tr>
</tbody>
</table>

Contrary though to the determiner, the clitic has been argued to belong to a more complex, dual category of an XP/X element being first merged as an XP with the VP and then as a head X with v (Chomsky 2001).

2.3 DP layers in Turkish

Turkish has no definite determiner and formal features (case and number but not gender) are marked on the noun. In Turkish definiteness and specificity correlate with accusative case marking on (in)definite direct objects (Enç 1991). This interaction between case, specificity/definiteness along with plural marking on the noun has been claimed to argue for the presence of functional projections above the NP, where number and definiteness get accommodated. Thus, NumP is projected in order to allow number under a multiple singular (MS) reading (Ketrez 2003). The DP is triggered in cases where complex predicates are disallowed, that is, where incorporation is blocked and the verb cannot take scope over the noun, as in (2) (Ketrez op.cit.).

(2)  Ayşе oku-du kitap-lar-l
    Ayşе read.PAST book.PL.ACC
    ‘Ayşе read the books.’

Thus, in example 2 the presence of case blocks verb incorporation and thus the sentence can only mean that Ayşе read multiple books and not that she was engaged in an activity of book reading (incorporation interpretation). Along the same lines, it has been proposed that the structure of the Turkish noun phrase projects a Case phrase KP (Kornfilt 2003), which is placed over the DP for reasons similar to those of Ketrez, i.e. blocking of verb incorporation and rendering the noun a definite interpretation.

(3)  [KP Spec [K` K [DP Spec [D` D NumP Spec [Num` Num [NumP Spec [N` N XP]]]]]]]

Note, though, that both morphological markings for case and number in Turkish are not syncretic, as in the Modern Greek DP, but are encoded by separate agglutinating morphemes.

2.4 Pronominal elements in Turkish

Turkish has strong pronouns which inflect for case, number and person. Turkish strong pronouns are inherently definite and disallow coreference with a local antecedent (Gürel 2002). Turkish also allows object drop, i.e. a null element pro to appear in D-linked
contexts, in which the referent has already been introduced in discourse and thus it is easily recovered, as in the example below (Kornfilt 1997):

(4) Buld-um!
    find,PAST.1S
    ‘I found (them, e.g. the keys).’

3. First language acquisition

Data on L1 acquisition of clitics and determiners are primarily found in longitudinal studies of four children from the Stephaney and the Christofidou corpus. According to Marinis (2003) definite determiners are present at Stage I (1;7-1;11) of acquisition (around 13-17%), although their use is more productive from Stage II (2;00-2;5) onwards, ranging from 32% to 77% at that stage.

As far as third person direct object clitics are concerned, although they are present at Stage I of acquisition, there is an omission rate of 46% in obligatory environments (Sinopoulou-Pavlatou 2005). Clitic use becomes more productive at Stage II of acquisition, that is, it reaches 85% of production in obligatory contexts. These findings from longitudinal data is further supported by an experimental study by Tsakali & Wexler (2004), in which direct object clitics were elicited from children aged 2;4-3;9 (two groups: 2;4-2;9 and 3;0-3;9) by replicating Schaeffer’s (2000) Elicited Production Task (see section 5.1.2). According to their findings children produce the clitic initially 95% of the time and later 100%. This supports the claim that the Unique Checking Constraint (UCC) (Wexler 1998) is not operative in child Modern Greek and thus no clitic omission is expected (Tsakali and Wexler op. cit.). They also note that children do not produce structures which are not acceptable in this D-linked context, i.e. null object or full lexical noun phrases.

Thus, both longitudinal and experimental data support the fact that although there is a stage of determiner and clitic omission in Modern Greek, this is rather short and children overcome it rather quickly.

4. Child language acquisition and second language acquisition theories

Second language acquisition theories within the Minimalist Programme (Chomsky 1995; 2001 onwards) place the burden of acquisition on feature interpretability, as this is the locus of crosslinguistic variation. At the same time, syntactic operations such as Move and Merge come free, being part of UG.

According to the Failed Feature Hypothesis (FFH) (Hawkins & Chan 1997; Tsimpli 2003) features not attested in the L1 will be problematic and potentially non-learnable for adult L2 learners. In the case of clitics and determiners this will be attested by a delayed acquisition pattern of the two D-elements and from the erroneous production of their phi-features (Tsimpli 2003; Dimitrakopoulou et al. 2003).

The Full Transfer/Full Access (FT/FA) Hypothesis (Schwartz & Sprouse 1994/96), on the other hand, argues that feature interpretability can affect initial stages of language acquisition, as the L1 feature inventory is transferred at the initial stage, but later restructuring of the L2 grammar is possible due to UG access. In the same line of reasoning, errors of commission or omission are not due to the absence of the corresponding representation of the features, but rather due to the problematic mapping of features onto lexical items (Lardiere 2000).
Turning to child L2 acquisition, studies up until recently have considered it to be parallel to child L1 acquisition with respect to UG access and developmental sequence (Epstein et al. 1996) eliminating the possibility of persistent acquisition problems. Current studies examining the acquisition of functional categories by child L2 learners have shown, though, that L1 functional categories are present at the initial grammars of child L2 learners (Whong-Barr & Schwartz 2002) suggesting a different acquisition pattern than that attested in the L1.

Following thus both the FFH and the FT/FA Hypothesis it is predicted that, since the functional category D is missing from the learners’ L1, the initial stage of acquisition will demonstrate transfer of these values, that is, absence of definite determiners and object clitics. Additionally, though, for the FFH both elements will exhibit a similar acquisition rate due to their categorical similarity (array of uninterpretable features, Tsimpli & Stavrakaki 1999).

5. The present study

5.1 Method

5.1.1 Placement Test

A well-attested characteristic of the minority school population in Greece is the high degree of variation of proficiency level within the same school grade (Tzevelekou et al. 2004). As a consequence, neither age nor grade constitutes reliable factors for determining children’s linguistic abilities. Therefore, before administering the main experimental material a test placing subjects to five proficiency levels was administered.

In order to place the participants at proficiency levels, the test developed by the University of Athens for measuring young learners’ language proficiency was administered first. The test Let’s Speak Greek I, II, III (Tzevelekou et al. 2003) covers all six grades of primary school, with each of the three booklets of the test corresponding to two grades of primary school (Table 3).

<table>
<thead>
<tr>
<th>Tests</th>
<th>Grade</th>
<th>Proficiency level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Let’s speak Greek I</td>
<td>1st – 2nd</td>
<td>-A1 – A2</td>
</tr>
<tr>
<td>Let’s speak Greek II</td>
<td>3rd – 4th</td>
<td>A1 – B1</td>
</tr>
<tr>
<td>Let’s speak Greek III</td>
<td>5th – 6th</td>
<td>A2 – B2</td>
</tr>
</tbody>
</table>

5.1.2 Experimental materials

The production of the definite determiner was tested through a story telling task based on Mayer’s (1969) ‘Frog, where are you?’ picture story. Clitics were elicited through a combination of a Truth-Value Judgment Task and an Elicited Production (TVJ & EP) Task (Schaeffer 2000). In this task, Experimenter I presents a story with puppets to the child and Experimenter II resumes the role of a silly puppet which cannot understand what is going on in the story. At the end of the story, Experimenter II gives a false statement of what actually happened. The task of the child is to check the validity of the puppet’s utterance. Then, Experimenter I formulates a question targeted to the child of the form “What is X doing to Y?”, where the response elicits the clitic in a D-linked environment, as in (5):
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(5) Exp. I: Ti kani i jata ston scilo?
   ‘What is the cat doing to the dog?’
Exp. II: ‘The cat is washing the dog.’ (false)
Child: ‘Ohi, ton cinighai’ (expected response)
   No, him-CL is chasing\_PRES\_3S

In the picture version of the TVJ & EP task eight sentences were administered, which mainly manipulated the production of the third person direct object clitic pronoun. In the act-out version of the task, the production of first, second and third person clitics was also tested. Here only the results from the third person clitic contexts are presented. The production of phi-features (number, gender) was also manipulated in the second task with two experimental stories for each gender and number leading to a total number of twelve experimental stories and six fillers (18 stories in total).

5.1.3 Subjects

In the present pilot study 66 children attending the 1st and 3rd minority primary schools of Komotini were tested on the production of the determiner and the clitic. The term ‘minority school’ refers to schools located in the North-eastern region of Greece (Thrace), where the curriculum is bilingual. Children attending the minority primary schools usually have no prior attendance of a kindergarten and thus there first substantive contact with the Greek language is in a classroom environment. Thus, by the age they reach primary school (age of attendance is around 6-7 years) their contact with Greek is quite limited. Subjects were thus grouped according to proficiency level (see section 5.1.1). Table 4 illustrates the distribution of subjects across proficiency levels:

<table>
<thead>
<tr>
<th>Proficiency level</th>
<th>Grade</th>
<th>Age range</th>
<th>Number of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>-A1</td>
<td>2nd</td>
<td>7-8</td>
<td>7</td>
</tr>
<tr>
<td>A1</td>
<td>2nd-4th</td>
<td>9-10</td>
<td>14</td>
</tr>
<tr>
<td>A2</td>
<td>2nd-6th</td>
<td>8-12</td>
<td>26</td>
</tr>
<tr>
<td>B1</td>
<td>3rd-6th</td>
<td>11-12</td>
<td>17</td>
</tr>
<tr>
<td>B2</td>
<td>6th</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>66</td>
</tr>
</tbody>
</table>

A control group of 50 children of the same age and corresponding school grades was selected (2nd to the 6th). The subjects attended two primary schools in Athens and were aged between 7 and 12 years old. The control group was administered all experimental tasks.

6. Results

The results from the story-telling task and the two versions of the combination of the Truth-Value and Elicited production task are presented below. The data from the control group are not included, since subjects in all groups exhibited a ceiling effect with respect to the production of the definite determiner and the clitic.
6.1 Production of the definite determiner

Figure 1 indicates the production of definite determiners in the story-telling task.

![Figure 1. Production of the definite determiner](image)

As shown, subjects placed at proficiency level -A1 produce the definite determiner around 26% of the time, although this production fluctuates significantly (from 4.4% to 40%) within subjects and correlates with the overall number of noun phrases produced (e.g. Mustafa produced 23 noun phrases out of which 1 was a full DP, whereas Güler produced 5, out of which 2 had a determiner). The production of the definite determiner follows a steady developmental path and it is fully acquired at the B1 and B2 levels. A one-way ANOVA revealed that there is a significant difference between each proficiency level and the next, which supports the finding of a normal developmental path ($F (3, 59) = 6.99, p < .001$).

6.2 Production of third person direct object clitic

Figures 2 and 3 indicate the production of the clitic in the act-out and the picture-based version of the combination of the Truth-Value and Elicited production task respectively.

Contrary to the uniform developmental pattern attested in the case of definite determiners, clitics require longer time for the child L2 learners to acquire. A one-way ANOVA showed that although an overall developmental path is attested in each task ($F (3, 54) = 3.42, p < .03$ and $F (3, 56) = 4.69, p < .01$ respectively), there is no significant difference between the intermediate groups with respect to the production of the clitic, but only between the intermediate and advanced ones, that is between proficiency level B1 and -A1 ($p < .02$), A1 ($p < .03$) and A2 ($p < .02$). A second interesting result is the great fluctuation in the production of other structures (noun phrases and null objects) before or apart from the production of the clitic.

A strong correlation was also found between the production of the definite determiner and the clitic in both tasks ($r (58) = .49, p < .001$ and $r (60) = .38, p < .01$, for the picture stimuli and the act-out task respectively). That is, in no case did any child produce the clitic without having produced the definite determiner first. At the same time, the more definite determiners they produced the more clitics they produced as well.
6.3 Phi-features on clitics and determiners

Errors of gender, number and case were calculated out of the total number of children that produced the two D-elements. Table 5 shows the error rate with respect to the production of phi-features on the two D-elements by the children that produced clitics and determiners across proficiency levels.
A two-tailed paired t-test between gender, number and case showed that there is a significant difference in the amount of gender errors compared to case and number errors for both the definite determiner (p < .02, p < .03 for gender to number and p < .02 for gender and case) and the clitic (gender to number p < .02 for group A1, p < .01 for A2 and p < .02 for B1 and B2). In case of the clitic the errors of gender and number are higher than the ones on the DP, which could be due to the locality of the dependence, i.e. the fact that the clitic refers to a contextually recoverable antecedent and not to a locally identified element (Cummins & Roberge 2004).

7. Discussion

Summarizing the results of the present pilot study, the following remarks can be made: (i) child L2 learners initially omit both D-element to a different extent, (ii) a later dissociation is found between the two, as third person direct object clitics emerge late in the learner’s interlanguage and take longer to acquire, (iii) after producing the definite determiner and clitics, erroneous production of their phi-features is attested.

As far as the first point is concerned, the findings of the present study are on a par with previous studies on child L2 acquisition where L1 features are present (Whong-Barr & Schwartz 2002). This argues for the fact that child L2 acquisition can also be affected by features in the L1 of the child L2 learners as in adult L2 acquisition. Points (ii) and (iii) further support the claim that child L2 acquisition follows a different developmental path from child L1 with respect to a prolonged omission of the third person direct object clitic and the erroneous phi-feature production, especially in case of gender, which is missing from the L1 (Bruhn de Garavito & White 2000).

The asymmetrical pattern observed in the acquisition of the two D-elements raises questions with respect to the restructuring processes that take place in the L2 learners’ interlanguage. From almost the (post-) initial stage it is evident that clitics and definite determiners do not have the same status in the learners’ interlanguage. The question that arises at this point is why L2 learners differentiate between these two morphophonologically similar elements and thus exhibit this asymmetrical pattern of acquisition. This pattern is especially problematic for theories that place the learnability load on feature interpretability (or the lack of), as they cannot explain how two elements with similar uninterpretable features are distinct in the learner’s grammar. On the other hand, mere transfer fails to capture late clitic production, too. It is maintained then that the prolonged stage of clitic omission cannot be seen either as mere transfer effect or as lack of feature interpretability problem, since following Chomsky (2001 onwards) these are the ones that drive syntactic operations and thus it is questionable why they should not be learnable.

Object omission is a robust phenomenon attested crosslinguistically in L1A and has been correlated with clitic omission from different perspectives, both pragmatic (e.g. C-domain deficits (Hulk & Müller 2000) or specificity spell-out (Schaeffer 2000)) and syntactic (cf. Wexler’s UCC 1998 and Jakubowicz et al. 1997 for merging operations in the L1 grammar caused by the non-canonical argument nature of the clitic).

Returning to the results of the present study, it can be seen that child L2 learners do not drop the object, as full lexical noun phrases are also produced, but it is rather the pronominal element, i.e. the clitic that is missing from their interlanguage. The fact, though, that they have already acquired the feature specification of the D-category through the determiner which is already produced around 60% of the time already from stage A1, but not the clitic, raises questions as to why this is so.
Going back to the theoretical treatment of both elements, the clitic is a deficient morphophonological form which appears on the verbal host in order to check its case features. Contrary though to the definite determiner, its occurrence is optional and depends on discourse properties. Recent theories within the Minimalist Programme have stressed the effect that complexity either due to syntactic objects and operations (Jakubowicz et al. 1997) within “narrow” syntax phenomena or of “interface” phenomena, i.e. those that lie between syntax and other domains, e.g. discourse (Sorace 2005), can have on L2 acquisition. Clitics in this respect have been claimed to impose a higher degree of complexity in computation due to their non-canonical argument status, interpreted either as dual categorical membership or lack of subcategorization for an NP (Jakubowicz et al. 1997).

In this respect it can be postulated that definite determiners and third person direct object clitics may have the same feature specification that would predict a similar pattern of acquisition of their morphological features. This fact is borne out by the data in Figure 3. The present account is also on a par with Separation Theories with respect to the acquisition of morphology, according to which lack or erroneous production of overt forms not attested in the learner’s L1 does not entail lack of abstract feature specification (Lardiere 2000) as determiners and clitics are indeed produced.

It remains though to be explained why this complexity of computation does not cause any problems for child L1 Greek, whereas optionality is persistent in the L2 learner’s interlanguage. These questions await further research.

8. Conclusions

The present paper explored the acquisition of clitics and determiners by Turkish-speaking L2 learners of Modern Greek. Child L2 learners seem to transfer from their L1 setting the initial omission of the two D-elements and differ from their L1 counterparts in the enduring optionality and late emergence of the clitic. Thus, although L1 acquisition seems to overcome this stage of clitic omission rather fast, in child L2 acquisition this stage is rather prolonged and lasts until advanced levels of proficiency. The asymmetrical pattern of acquisition observed in the data raises questions as to the factors affecting L2 interlanguage, in the process during which the L1 grammar is being restructured in order to accommodate L2 settings.

References


