University of Cambridge
Faculty of Modern and Medieval Languages
Department of Theoretical and Applied Linguistics

The L1 Acquisition of Clitic Placement in Cypriot Greek

Theoni Neokleous
Lucy Cavendish College

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DECLARATION

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text. No part of this dissertation has been submitted for any other qualification at any University. This dissertation does not exceed the regulation length, including footnotes, references and appendices but excluding the bibliography.

"From the point of view that I adopt here, the fundamental empirical problem of linguistics is to explain how a person can acquire knowledge of language"

Chomsky, N. (1973, "Conditions on Transformations")

ABSTRACT

This thesis investigates the first language acquisition (L1A) of pronominal object clitics in Cypriot Greek (CG) by typically developing (TD) children, focusing on an exceptional form of non–adult–like clitic placement attested in early data. The aim of the present study is twofold. On the one hand, it aims to sketch the developmental stages in the course of L1A of CG in relation to other clitic languages. On the other, it investigates whether and to what extent syntactic (Agouraki 2001, Terzi 1999a, 1999b), prosodic (Condoravdi and Kiparsky 2001) and interface approaches (Mavrogiorgos 2012, Revithiadou 2006) can account for early clitic production.

Research on L1A of clitic pronouns has demonstrated both clitic realisation and omission in child languages. However, no instances of clitic misplacement have been reported for early European languages, with the interesting exceptions of CG (Petinou & Terzi 2002) and European Portuguese (Lobo & Costa 2012).

The present thesis examines the L1A of CG in the age range 2−4 on the basis of spontaneous and experimental data, cross−sectional as well as longitudinal, with a focus on clitic placement. Spontaneous speech data were collected from 8 children, and one of the children was also followed longitudinally for a period of 6 months. An elicited production task performed by 50 children was used to generate 3rd person singular accusative object clitics. The results of the study indicate that, for CG: (i) clitic placement in enclisis environments is adult–like from the onset in structures involving single clitics and clitic clusters, as well as in Clitic Doubling and Clitic Left Dislocation; (ii) clitic misplacement is attested in proclisis contexts in a subset of children aged 2;6 to 3;0; (iii) clitic misplacement does not correlate with early non–finite forms; (iv) occasional realisation of two copies of the clitic is attested in some children aged 2;6 to 3;0; (v) by age 3;6, TD children manifest adult–like clitic placement.

These findings raise issues regarding the acquisition of clitics in different classes of languages (Tobler–Mussafia, finiteness–sensitive languages, languages exhibiting second position restrictions), as well as the role of syntax, prosody and the syntax–phonology interface in clitic L1A. The current study suggests that only Tobler–Mussafia languages display clitic misplacement, as attested in the L1A of CG. Clitic misplacement in CG is interpreted within an interface account in line with Revithiadou (2006) and, following the spirit of Bošković (2000), it is assumed that the placement requirement imposed on CG clitics "can be captured in its entirety through a filtering effect of the phonology on the syntax" (2000:105). Clitic placement in CG is an interface phenomenon: the syntax provides two copies of clitic pronouns (Franks 1998) and the syntactic outcome is filtered through a phonology–controlled procedure.

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INTRODUCTION

Cardinaletti and Starke describe clitic pronouns as severely deficient pronominal elements (1999:168). This deficiency has, however, proven inversely proportional to the attention they have received in the literature. The past two decades have seen a proliferation of scholarly work on cliticisation from a theoretical as well as from an acquisition perspective.

The present thesis investigates the first language acquisition (L1A) of pronominal object clitics in Cypriot Greek (CG) by typically developing (TD) children, focusing on an exceptional form of non–adult–like clitic placement attested in early data. The aim of the present study is twofold. On the one hand, it aims to sketch the developmental stages in the course of L1A of Cypriot Greek in relation to other clitic languages. On the other, it investigates whether and to what extent syntactic (Agouraki 2001, Terzi 1999a, 1999b), prosodic (Condoravdi and Kiparsky 2001) and interface approaches (Mavrogiorgos 2012, Revithiadou 2006) can account for early clitic production.

Research on L1A of clitic pronouns has demonstrated both clitic realisation and omission in child languages. However, no instances of clitic misplacement have been reported for early European languages, with the interesting exceptions of Cypriot Greek (Petinou & Terzi 2002) and European Portuguese (Lobo & Costa 2012). Following the tri–partition of clitic languages proposed in Mavrogiorgos (2012), most Romance languages, including Catalan, Italian, Spanish and Romanian, as well as Standard Modern Greek, are categorised as finiteness–sensitive; languages such as Serbo–Croatian adhere to second position restrictions; while Cypriot Greek, Galician and European Portuguese pattern alike in obeying the Tobler–Mussafia law.

The present thesis aims at showing that a correlation holds between clitic misplacement in child language and the Tobler–Mussafia properties of the language being acquired. This is implemented by systematically examining the L1A of Cypriot Greek (CG) in the age range 2−4 on the basis of spontaneous and experimental data, cross−sectional as well as longitudinal, with a focus on clitic

placement. Spontaneous speech data were collected from 8 children, and one of the children was also followed longitudinally for a period of 6 months. An elicited production task performed by 50 children was used to generate 3rd person singular object clitics. The results of the study indicate that, for CG:

(i) clitic placement in enclisis environments is adult–like from the onset in structures involving single clitics and clitic clusters, as well as in Clitic Doubling and Clitic Left Dislocation;

(ii) clitic misplacement is attested in proclisis contexts in a subset of children aged 2;6 to 3;0;

(iii) clitic misplacement does not correlate with early non–finite forms;

(iv) occasional realisation of two copies of the clitic is attested in some children aged 2;6 to 3;0;

(v) by age 3;6, typically developing children manifest adult–like clitic placement.

These findings raise issues regarding the acquisition of clitics in different classes of languages (Tobler–Mussafia, finiteness–sensitive languages, languages exhibiting second position restrictions), as well as the role of syntax, prosody and the syntax–phonology interface in clitic L1A. The current study suggests that only Tobler–Mussafia languages display clitic misplacement, as attested in the L1A of CG.

Clitic misplacement in CG is interpreted within an interface account in line with Revithiadou (2006) and, following the spirit of Bošković (2000), it is assumed that the placement requirement imposed on CG clitics "can be captured in its entirety through a filtering effect of the phonology on the syntax" (2000:105). Clitic placement in CG is an interface phenomenon: the syntax provides two copies of clitic pronouns (Franks 1998) and the syntactic outcome is filtered through a phonology–controlled procedure.

The thesis is organised as follows. Chapter 1 provides an overview of the language examined and lays out the basic assumptions with regard to the CG clause structure. Chapter 2 focuses on the morpho–phonological properties, as well as the distribution of object clitic pronouns in CG, and chapter 3 reviews the syntactic, prosodic and interface accounts that have been put forward for their

placement. Chapter 4 reviews a number of studies conducted on the L1 acquisition of clitics cross–linguistically. Chapter 5 presents the methodology adopted in the current study and chapter 6 presents the results obtained. The thesis concludes with chapter 7, which discusses the theoretical implications of the findings of the present study for the developmental patterns attested in the course of clitic L1A, and evaluates the formal accounts proposed for cliticisation in CG.

CHAPTER 1: THE CYPRIOT GREEK CP

1.1. Introduction

Cypriot Greek (henceforth CG) is a variety of Modern Greek spoken by approximately 700,000 people[1] residing in the Republic of Cyprus[2]. I deliberately use the term *variety* instead of *dialect* or *language*. Whether CG constitutes a dialect of Modern Greek or a separate language is a highly debatable issue. Arvaniti (2010, and a host of references therein) offers a thorough presentation of the socio–linguistic situation in Cyprus and a review of the scholarly work accomplished on various aspects of it, including the status of CG as compared to Standard Modern Greek, the development of a Cypriot Koiné and of dialectal levelling on the island, the manifestation of code–switching and/or code–mixing, the speakers' awareness of the linguistic varieties spoken on the island, the language attitudes amongst Cypriot speakers, and the relationship between education and language. This thesis examines the acquisition of CG, the variety that young Greek Cypriot children acquire effortlessly and in a native–like way, whatever its status, and hence leaves aside sociolinguistic aspects of the linguistic landscape in Cyprus.

The Greek–speaking population of the island uses CG in everyday oral communication and Standard Modern Greek (henceforth SMG)[3], one of the official languages of the Republic of Cyprus (the other two being Turkish and English), in written texts, as well as in formal speech acts. From a diachronic

[1] According to the most recent census carried out by the Statistical Service of Cyprus, in 2011 667,398 Cypriot citizens were residing on the island (source: http://www.mof.gov.cy/mof/cystat/statistics.nsf/populationcondition_22main_en/populationcondition_22main_en?OpenForm&sub=2&sel=2, Accessed in September 2012, File: POPULATION ENUMERATED BY CITIZENSHIP, SEX AND POSTAL CODE, 2011), the vast majority of whom are native speakers of CG. Apart from the residents of the island, the dialect is spoken by some tens of thousands of Greek Cypriot immigrants who reside with their families in foreign countries, including Greece, the United Kingdom, South Africa and Australia.

[2] The island's population is comprised of Greek Cypriots and Turkish Cypriots; there are also other ethnic and religious groups, including Armenians and Maronites.

[3] Cf. Arvaniti (2010) for a description of what she calls *Cypriot Standard Greek*. Arvaniti (2010) argues that SMG as used in Cyprus has been increasingly diverging from the Standard variety as spoken in Greece and the two are recognizably different.

perspective, CG evolved from the Koiné standard of the Hellenistic period. The purpose of the current chapter is to offer a brief description of the Cypriot variety from a synchronic perspective, as well as to highlight the points of convergence and divergence from the Standard variety. This chapter is an overview of the main characteristics of the morpho–syntax of CG. This overview will constitute the background for the specific topic of the current thesis, namely the acquisition of object clitic placement by young Greek Cypriot children. The various properties of clitic constructions in CG can only be discussed within a clearly defined framework regarding the syntax of the variety. Therefore, I first formulate the clause structure of CG in the current chapter before then proceeding, in the following chapter, to a discussion of the structures under investigation. Moreover, it is crucial to highlight the similarities and differences of the CG clause as compared to the SMG clause that allow for a direct comparison of acquisition data from CG– and SMG–speaking children.

The first section (1.2) discusses the left periphery of the CG clause, namely the functional heads projected above IP, and, in particular, their relative order and feature specification. Roussou's (2000) proposal for an articulated CP in SMG is adopted and adapted for CG. Hence, a preliminary formulation of the CG CP is offered in the first section, which will then be refined in the subsequent sections. The rest of the chapter is devoted to the following topics, addressed in separate sections: the Topic and COp(erator) heads (1.3), wh–question formation (1.4) and the syntax of it–clefts (1.5).

1.2. The articulated C–structure in CG

The phenomena observed in child language with regard to clitic placement are directly related to inflection, as well as to the functional projections above IP, and, in particular, the heads where negative particles, modal particles and complementizers are realised. It is therefore clear that the structure of the CP needs particular attention.

I adopt Roussou's (2000) proposal for the SMG left periphery, as outlined in (1). Roussou (2000) suggests that the SMG clause structure involves three C

heads, each carrying different features: the lowest one (CM) is specified for modality, the middle one (COp) has a clause–typing feature and the highest one (C) has a feature for subordination.

(1) [$_{C}$ pu [Topic/Focus [$_{COp}$ oti/an/na/as [$_{Neg}$ dhen/min [$_{CM}$ tha/na/as [$_{I}$ cl + V...]]]]]] (Roussou 2000:79)

CG behaves similarly to SMG in many respects. Similarities in the properties and distribution of different modal particles and negators, in the use of topicalised phrases, and in wh–question formation are the points of convergence between the two varieties. Building on these common properties and the similar distribution of modal and negative particles in CG and SMG, I will attempt to offer a first formulation of the CG CP.

CG, like SMG, makes use of the particles *as*, *na* and *tha*. The particle *na* has been traditionally analysed as the subjunctive marker (Veloudis & Philippaki–Warburton 1983), while it has also been proposed that *na* is a complementizer (Agouraki 1991, Tsoulas 1993). The particle *tha* has been traditionally treated as the future particle, while *as* is a hortative particle found in root contexts alone (Roussou 2000:65). Revithiadou and Spyropoulos (2008) indicate that major grammaticalization processes that affected the morpho–syntax of the verb group in Greek (see Horrocks 1997, Philippaki–Warburton & Spyropoulos 2004, among others) have created the particles *as*, *na* and *tha* as follows: *afes* "let" → *as*, *ina* (COMP) → *na*, and *thelo ina* "want to" → *tha*.

As and *na* are only compatible with the negator *min* in SMG and its CG equivalent *men*[4], and they obligatorily precede it. As shown in examples (2) and (3), in CG negative clauses, *na* and *as* immediately precede *men*, patterning like their SMG counterparts.

(2) Na (men (CG) / min (SMG)) to feri.
M NEG it–CL.ACC bring–3S
"S/he should (not) bring it"

[4] The resemblance of the two forms is obvious and their properties and distribution do not differ.

(3) As (men (CG) / min (SMG)) to feri.
M NEG it–CL.ACC bring–3S
"Let him/her (not) bring it"

The particle *tha* is used in both CG and SMG for future tense formation. This is the reason why it has been traditionally analysed as the future particle. Yet while *tha* in SMG is used in both affirmative and negative future clauses, in CG it is only used in negated future clauses ((4) vs. (5)). The particle used in CG affirmative future clauses is *enna*[5] (4). Apart from the difference in the specific form of the particle used, CG resembles SMG in all other respects of future tense formation. To be precise, the CG particles *enna* in affirmatives and *tha* in negatives combine with the verb that bears future morphology and give rise to a periphrastic future tense.

(4) Enna (CG) / Tha (SMG) to feri.
M it–CL.ACC bring–3S
"S/he will bring it"

(5) (Dh)e(n) tha (CG & SMG) to feri.
NEG M it–CL.ACC bring–3S
"S/he will not bring it"

As shown in (5) the particle *tha* in negated future clauses, in both CG and SMG, is only compatible with the negator *(dh)e(n)*. There are, however, two points of divergence in the formation of negated future clauses in the two varieties. Firstly, while in SMG two particles are used, with the negative particle *dhe(n)* immediately preceding the future particle *tha*, in CG, negated future clauses are usually headed by the particle *etha* alone. The latter constitutes an amalgam form which combines *(dh)e(n)* and *tha*. However, when the CG clause is headed by the complementizer *an*, negated future clauses are formed like their counterpart SMG structures with the realisation of both *(dh)e(n)* and *tha* (6). With

[5] Ralli (2006:136) observes that *tha* originates from the verb *thelo* ("want"), which takes a *na*–complement (*tha*<*thelo*+*na*). Notice the morphological similarity with the CG future particle *enna*.

respect to feature specification, each of the two particles, *dhen* and *tha*, bears a different feature: the former denotes negation and the latter futurity. Hence each spells out a distinct functional head: *dhen* realises NegP and *tha* CM. Thus, the CG particle *etha* expresses both negation and futurity and spells out the two corresponding functional heads.

(6) An dhe(n) tha mu to feris,
COMP NEG M me–CL.GEN it–CL.ACC bring–2S
thelo na to ksero.
want–1S M it–CL.ACC know–1S
"If you will not bring it to me, I want to know it"

Secondly, negated future clauses in CG may also be headed by *enna* immediately followed by the negator *men* (7), a structure absent from SMG. In this respect, the distribution of *enna* is reminiscent of the distribution of *na* (8) in that they both occur with the negator *men* (CG); specifically, they obligatorily precede it.

(7) Enna (men) to feri?
M NEG it–CL.ACC bring–3S
"Will s/he (not) bring it?"

(8) Na (men (CG) / min (SMG)) to feri.
M NEG it–CL.ACC bring–3S
"S/he should (not) bring it"

The preceding presentation of the properties and distribution of the particles *as*, *na* and *tha* in CG shows that these particles behave like their SMG counterparts. I adopt Roussou's (2000) proposal for the SMG CP in (1) for the CG CP as well, and I assume that *na/tha/as* realise CM[6], the C head encoding

[6] Observe the similarity of Roussou's (2000) proposal to Philippaki–Warburton's (1987, 1998) with respect to the functional projection in which *na* and *as* are realised. In Philippaki–Warburton (1987, 1998) these particles appear under the Mood Phrase, a head that encodes modality and hosts *na*, *as*, the indicative marker and the affix marking the imperative.

modality, in both varieties. Yet, for CG, the CP proposal in (1) has to be extended to include the CG particle *enna* as well, since *enna* has the same distribution as *na*. It is thus assumed that *enna* is also merged under CM, together with *na/tha/as*.

Roussou's (2000) argumentation as to why *na/tha/as* are modal particles merged under CM rather than inflectional particles merged within the inflectional domain is based on two points. The first refers to the distribution of *na/tha/as*, and their position in relation to pronominal clitics. The second is related to the status of these particles and the various interpretations assigned to clauses that they head depending on the temporal and aspectual specification on the verb involved.

As for the first argument, *na/tha/as* in SMG precede pronominal clitics and can take "dependent" (–past, +perfective) verbal forms (Roussou 2000:66). Both observations also apply to the behaviour of *na/enna/tha/as* in CG, as shown in (9).

(9) As / Na / Enna / Etha to feri.
M it–CL.ACC bring–3S
"Let him / He should / will / will not bring it"

Current syntactic analyses of cliticization in SMG (Mavrogiorgos 2009, 2010) and Romance languages (Roberts 2010) assume that clitics adjoin to a functional projection within the inflectional domain. Taking into account the placement of CG *na/enna/tha/as* in relation to pronominal clitics, I suggest that these particles are realised in some functional head higher than I. The lowest C head in (1), namely CM, seems to be a legitimate candidate for *na/enna/tha/as* to adjoin.

As for the second argument, Roussou (2000:71–72) focuses on the status and the properties of *na* and *tha* in SMG to show that they are not inflectional but rather modal particles. Following Roussou, I assume that although *na* and *tha* have been traditionally analysed as the subjunctive (Veloudis & Philippaki Warburton 1983) and the future particle respectively, they cannot be considered inflectional particles. In particular, it seems that the contexts of use of *na* and *tha* are not restricted to clauses bearing subjunctive and future interpretation

correspondingly, but the particles in discussion also participate in clauses with various modal readings.

Consider, for example, clauses headed by the so–called subjunctive particle *na*. Even though *na* is used for the formation of subjunctive clauses in both CG and SMG, it is not an inflectional element of the mood paradigm, as it does not bear morphological inflection; the subjunctive morphology is present on the verbal host. The same argument applies to *as*, which lacks inflection in both CG and SMG, as well as to the CG future particles *enna* and *tha*, as the morphological realisation of the future tense in clauses headed by *enna* and *tha* is only present on the verb.

In addition, *enna* and *tha* do not necessarily mark futurity, and thus they do not behave like future particles alone. Instead, they occur in a number of modalised, non–future contexts. Roussou (2000) indicates that the particles *na/tha/as* in SMG "sub–categorise for all possible inflected verbal forms along the ±past, ±perfective specifications" (2000:72) and the interpretation of the clauses headed by these particles is not only based on the individual particle involved, but also depends on the temporal and aspectual specification of the verbal host. Both points apply to the particles *na/tha/as* as used in CG, as well as to *enna*. Examples (10–11) illustrate how the interpretation of clauses headed by *enna* and *etha* is modified when the tense and/or the aspect of the verb is changed.[7]

(10) Enna / Etha to feri / ferni [+/–PERF].
M / NEG M it–CL.ACC bring–3S
"S/he will / won't bring it"

(11) Enna / Etha to efere / eferne [+/–PERF].
M / NEG M it–CL.ACC brought–3S
"S/he would / wouldn't have brought it"

The previous discussion shows that there are no indications that *na/enna/tha/as* are located within IP in the CG clause. Recall that the particles in

[7] Note that even though the examples in (10–11) involve clauses headed by *enna* and *etha* alone, all the particles in discussion behave similarly in this respect; hence CG clauses headed by *na, tha* and *as* may also have a number of different modal readings depending on the verbal specification.

question do not form inflectional paradigms, and also that clauses headed by them can have various modal interpretations. Therefore I follow proposals in Roussou (2000) in assuming that these particles are modal rather than inflectional elements. The former term better captures their status, their properties and their overall behaviour. Moreover, it is well known that modality, unlike mood, is not tied to verbal forms and can be expressed by different means, the use of particles being one of them. Consequently, *na/enna/tha/as* could be accommodated under a C head with modal specification. Roussou's (2000) CM (see (1)), a C head specified for modality, seems to be an appropriate host.

However, there is an important difference between *na/enna/as* and *tha* in CG with respect to their interaction with negators, which needs to be captured as well. In particular, *na/enna/as* and *tha* differ in the choice of negative particle, as well as in the order of the negator and the modal particle. As previously discussed, *enna/na/as* are only compatible with *men* and must obligatorily precede it, while *tha* can only occur with *(dh)e(n)* and must immediately follow it. Roussou (2000) has proposed that *na* and *as* in SMG undergo movement from CM to COp, an Operator position between the highest and the lowest C in her tripartite C system. This proposal is adopted for their CG counterparts and is extended to *enna* as well. In this way, the difference between *na/enna/as* and *tha* in their choice of negators and their ordering with respect to them is adequately accommodated.

Turning now to the Neg head[8], the discussion on the interaction of modal particles with negators has shown that the clause structure proposed by Roussou (2000) in (1) can accommodate the CG facts as well, merely substituting the SMG negator *min* by its CG counterpart *men*. As for the negator *dhen*, I assume that it appears under NegP in both SMG and CG. In this way, given that Neg is the functional head immediately preceding CM, where *tha* is realised, the order *dhe(n) tha* as well as the formation of the CG negator *etha* easily follow.

The clausal structure in (12) represents the left periphery of the CG clause, as has been formulated so far on the basis of the above discussion. *Na/enna/tha/as*

[8] Cf. Alexiadou (1994) for a discussion on whether *dhen* and *min* adjoin to a single Neg head or each adjoins to a distinct one.

are located under CM, the lower C head. The CG particle *etha*, composed of a negative and a modal particle, spells out the two corresponding C heads, namely Neg and CM. Furthermore, *tha* can only appear under CM, and, therefore, spells out only this head; *na/enna/as*, on the other hand, can realise both CM and COp and, correspondingly, spell out both a modal and a clause–typing feature (Roussou 2000:74). The postulation of an additional C projection above CM in the CG CP (12) is in line with proposals in Agouraki (2010)[9] as well, who postulates the Force position introduced by Rizzi (1997). This position is identical with Roussou's (2000) COp position for SMG (1)[10], which is the analysis I adopt.

(12) $[_{COp}$ na/enna/as $[_{Neg}$ (dh)e(n)/men $[_{CM}$ na/enna/as/tha $[_{I}$...]]]]]

Roussou's (2000) proposal for the left periphery differs from Rizzi's (1997) representation in a crucial respect: it involves a tripartite C–structure, whereas Rizzi's involves only two C heads, Fin and Force[11]. It is important to note that Roussou's CM projection corresponds to Rizzi's Fin head (Roussou 2000:73). Rizzi's Fin head carries information about finiteness including mood specification, tense, aspect and agreement. Both Roussou's CM and Rizzi's (1997) Fin may well serve as adjunction sites for the verb.

The discussion so far has shown that the functional heads CM, NEG and COp are projected in this order above IP in the CG clause structure. The articulated CG CP includes the highest C head as well, a head specified for subordination (Roussou 2000), in which the complementizer *pu* is realised in both SMG and CG. The slightly modified CG CP, extended by comparison to the one in (12), is outlined in (13). The structure in (13) features a tripartite C–structure for the CG clause, along the lines of Roussou's (2000) proposal for SMG, with only minor differences from the SMG structure, as outlined in (1).

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[9] Agouraki points out that in terms of Rizzi's (1997) discussion of the clause left periphery, CG provides evidence for the presence of another functional projection, namely of Neg/Aff, the head hosting Negation and Affirmation (2010:543). Nevertheless, I consider the postulation of Neg/Aff in the CG CP not to be justified.

[10] The only point of divergence concerns the terminology adopted: Agouraki (2010) follows Rizzi (1997) and refers to a Force position, while Roussou (2000:73) adopts the terminology of Manzini and Savoia (1999) and refers to a COp head.

[11] Force in Roussou's proposal (2000:80) is split into two heads: COp and the highest C head.

(13) [$_{C}$ pu [$_{COp}$ oti/an/na/as [$_{Neg}$ dhen/min [$_{CM}$ tha/na/as [$_{I}$...]]]]]

1.3. Topic and COp positions

According to Alexiadou and Anagnostopoulou (1998), subjects in SMG and other pro–drop languages, like CG, occupy the Topic position. Objects in OVS order also occupy the Topic position, and the DP that constitutes the object of the clause must be doubled by a pronominal clitic forming a CL(itic) –L(eft)-D(islocation)[12] structure (14), unless the object of the clause is an XP bearing contrastive focus (15). Objects in CG may also appear in R(ight)–D(islocation) (16), as well as in Clitic Doubling and CL(itic)–R(ight)–D(islocation) constructions. CLRD and CD structures are both represented in example (17) with the presence or the absence of a pause immediately before the doubled object DP differentiating the two types of constructions. Specifically, (17) is considered a CLRD construction if there is a pause immediately before the RDed constituent *to moro*, but a CD construction if there is no pause between the clitic and the doubled object phrase.

(14) To koritsaki endisa to.
The girl–ACC.DIMUN dressed–1S it–CL.ACC
"The little girl I dressed"

(15) To koritsaki endisa, oi to aghoraki.
The girl–ACC.DIMUN dressed–1S NEG the boy–ACC
"The little girl I dressed, not the little boy"

(16) Endithike mesa se pende lepta [PAUSE] i Maria.
Got dressed–3S within five minutes–ACC the Mary–NOM
"She got dressed within five minutes, Mary"

[12] "As shown in Agouraki (1993) for SMG, CLLDed objects have both A– and A´–properties. The claim extends to the CG data as well. The evidence that CLLDed objects have A–properties relates to binding, the existence of subject+verb idioms and discontinuous idioms, quirky subjects, pseudo–relatives, subject–oriented adverbs and control verbs. In all these cases it is shown that there is no asymmetry between subjects and CLLDed objects. In Agouraki (1993) the pieces of evidence for the A´–properties of CLLDed objects were taken to be, firstly, the fact that this is not a thematic position and, secondly, the interpretation of Topicalization" (Agouraki 2010:528).

(17) Endise to [PAUSE] to moro.
Dressed–3S it–CL.ACC the–ACC baby–ACC
"S/he dressed him/her, the baby"

Anagnostopoulou (2006:546–547) offers a very good diagnostic for differentiating between CD and CLRD constructions that can be applied in constructions like (17) which involve an object phrase doubled by a pronominal clitic at the left of the object DP. Such a clause should be considered a Clitic Doubling construction if it allows a subject that is not pre–supposed and bears main sentence stress to appear at the end of the clause, forming a construction of the type CLi–V–XPi–S. And, conversely, if a non–presupposed subject bearing main stress cannot appear at the end of such a clause, then it should be considered a CLRD construction. If we want to use Anagnostopoulou's diagnostic to decide whether (17) is a CD or a CLRD construction, we should test whether a stressed DP can appear at the end of the clause, as in (18). If it can, it is a CD structure, otherwise it is a CLRD structure.

(18) Endisen to to moro [i mama tu].
Dressed–3S it–CL.ACC the baby–ACC the mum–NOM his–POSS
"She dressed the baby, the baby's mum"

The topic position in CG is occupied by DPs that appear as topicalised subjects or objects (19), as well as preverbal universal quantifiers. These are occupying the [Spec,TopicP] position (Agouraki 2010).

(19) Ulus tus mathites edhokamen tus vivlia.
All the students gave–1PL them–GEN books–ACC
"To all the students we gave books"

As shown in the previous section, the left periphery of the CG clause involves a COp position as well, above which all the other pre–verbal stressed constituents, including wh–phrases, existential quantifiers (20), negative

quantifiers (21), negative polarity items (22) and anaphoric/deictic proforms (23) appear. For Agouraki (2010) all these constituents adjoin to a Force position. Yet, as has already been noted, Agouraki's (2010) Force is identical to Roussou's (2000) COp, which I have adopted instead (see (13)). Thus, terminology aside, my proposal concerning the adjunction site of the elements in question coincides with both Roussou (2000) and Agouraki (2010).

(20) O kathenas enna mboruse na to kami.
The everyone–NOM M could–3S M it–CL.ACC do–3S
"Everyone could have done it"

(21) Kanenas etha mboruse na to kami.
None–NOM NEG M could–3S M it–CL.ACC do–3S
"None could have done it"

(22) Pote etha mborusa na to kamo.
Never NEG M could–1S M it–CL.ACC do–1S
"I could never have done it"

(23) Tutos mbori na to kami.
This–NOM can–3S M it–CL.ACC do–3S
"He can do it"

Notably, within Agouraki's (2010) approach, these pre–verbal stressed constituents function as operators that check an [Emphasis] specification on C. This point is directly related to the account she has proposed for the syntax of CG clitics which is built on the idea that CG has a filled C–domain requirement[13]. The filled–C requirement is also incorporated into her proposal on focus strategies in CG (Agouraki 2010), where she discusses a number of constituents appearing in the left periphery of CG. In particular, she argues that a filled–C is necessary so that the specification of the sentential force on C is checked in overt syntax

[13] Agouraki's (2001) proposal for clitic placement in CG is discussed in detail in chapter 3. Briefly, she proposes that pre– and post–verbal placement of CG clitics depend on the filled C–domain requirement of the variety. She claims that, if the C position is occupied by some element, the verb does not move to C, but rather remains in IP. Thus, given that in her account clitics adjoin to a functional projection higher than I, proclisis follows. If, however, the C position is not filled, the verb moves to C to fulfill the filled–C requirement; in this case, the clitic appears post–verbally and enclisis follows.

(2010:542). Therefore, [Spec,CP] stressed constituents, in complementary distribution with stressed V–in–C and stressed Neg–in–C, check an [Emphasis] specification on C. Emphasis is assumed to be one of the possible specifications of sentential force on C, denoting emphasis on the event[14]. The validity of the aforementioned proposal depends on the behaviour of CG clitics and, in particular, on whether the verbal host in clitic constructions undergoes V–to–C movement, as suggested in Agouraki (2001). This thesis is intended to shed light on issues related to the syntax of CG clitics, and, hence, check the validity of Agouraki's (2010) filled–C requirement / requirement for the specification of the sentential force on C.

With respect to the relative order of the COp and the Topic projections in the CG CP, it should be noted that both the Force head in Agouraki (2010) and the corresponding COp head in Roussou (2000) appear lower than TopicP. I adopt this approach on the basis of the following fact (Agouraki 2010:530–31): in clauses involving both a topicalised phrase and an element in the Spec Force/COp head, such as a wh–element, the topicalised constituent always precedes the other constituent; compare grammatical (24) with ungrammatical (25). Interestingly, (25) is equally bad with a pre– and a post–verbal clitic, indicating that irrespective of where the clitic appears, the relative order of the constituents appearing under TopicP and Spec Force/COp is not free[15]. The right order in shown in (24).

(24) To vivlio pu to evales?
The book–ACC where it–CL.ACC put–2S

(25) *Pu to vivlio to evales / evales to ?
Where the book–ACC it–CL.ACC put–2S

[14] The evidence she offers for the "emphasis on the event" interpretation of clauses involving preverbal stressed constituents includes: "(a) the absence of new information/contrastive readings for [Spec,CP] stressed constituents, (b) the availability of weak readings alone for quantifiers, and (c) the possibility of having a [Spec,CP] object existential quantifier and an object CP in the canonical object position" (Agouraki 2010:536).

[15] Having Rizzi's (1997) articulated CP in mind, one may claim that there is a Topic position below Force/COp as well. Yet this position is not available in SMG/CG. Apparent COp–Topic orders, such as in example (1) are derived by movement of *oti* from COp to the higher C (Michelioudakis p.c.):

1. Ksero oti ta mila (dh)en ta efaen i Maria.
Know–1S COMP the apples–ACC NEG them–ACC ate–3S the Mary–NOM
"(I) know that, as for the apples, Mary didn't eat them"

"The book, where did you put it?"

Agouraki (2010) makes an interesting point about scope positions in the CG clause. She examines the position(s) and properties of preverbal stressed constituents and convincingly argues against the postulation of a Focus position in CG (2010:539–540). The basis of her argumentation is that clauses involving stressed constituents in CG do not have the characteristics shared by clauses involving syntactic foci, namely (a) across–the–board application, (b) contrastive / new information interpretation, (c) a Focus–Presupposition structure, and also that (d) it is not the case that only foci can bear stress in CG. In relation to (a), she argues that preverbal stressed constituents in CG form a small closed set and she gives an exhaustive list for constituents that can appear stressed in preverbal position. Her list comprises the following elements: universal quantifiers, *also*–phrases, *even*–phrases, existential quantifiers, negative quantifiers, negative polarity items (NPIs), *only*–phrases and anaphoric/deictic proforms. As for (b), she claims that the contexts of use for preverbal stressed constituents in CG do not support a contrastive / new information interpretation. The existence of a Focus–Presupposition structure is rejected as well. She argues that the semantic content of some of the preverbal stressed items, including existential quantifiers, negative quantifiers and NPIs, is incompatible with presupposition marking. As for anaphoric/deictic proforms and *only*–phrases, she claims that their contexts of use show that they do not have a presupposition structure. She also mentions that since [Spec,CP] is not a necessarily stressed position, it cannot be a Focus position. Agouraki's (2010) proposal is in line with Grohmann et al.'s (2006:89) argument that CG, unlike SMG, "has bona fide cleft structures in lieu of syntactic focus movement".

Following Agouraki (2010), and departing from Roussou (2000), I assume that the left periphery of the CG CP has two scope positions in its surface syntax: the Topic position and the Force or COp position, but not a Focus position. The refined CG clausal structure including a Topic projection is outlined in (26).

(26) $[_{C}$ pu $[_{Topic}$ $[_{COp}$ oti/an/na/as $[_{Neg}$ dhen/min $[_{CM}$ tha/na/as $[_{I}$...]]]]]]

1.4. Wh–question formation

This section discusses wh–question formation in CG as compared to SMG. In CG and SMG alike, wh–argument questions are headed by the pronoun *pcos* ("who") inflected for nominative (27), accusative (28), or genitive (29) case. Examples (27), (28), and (29) constitute a subject–question, a direct–object question, and an indirect–object question respectively; the pronoun is appropriately inflected for number and gender. *Pcos* can be either used alone, in which case the translation offered in (a) applies, or as a quantifier that has scope over some NP, in which case the translation in (b) applies. Other pronouns used in both CG and SMG for the formation of wh–argument questions are *posos* ("how much") (30) and *ti* ("what") (31). *Posos* and *ti* pattern like *pcos*, namely they can either appear alone or as quantifiers that have scope over some NP. The wh–words in question share the same morphological properties in CG and SMG, modulo phonological differences. In CG alone, however, they optionally combine with the dialectal element *embu* (<*en*+*pu*) [16], which has the meaning of "(it) is that" in affirmative clauses and "is (it) that" in interrogatives.

(27) Pcos (mathitis) (embu)[17] irte?
Who–NOM (student–NOM) is–3S COMP came–3S
a. "Who came?"
b. "Which student came?"

(28) Pcon (mathiti) (embu) idhes ?
Who–ACC (student–ACC) is–3S COMP saw–2S
a. "Whom did you see?"
b. "Which student did you see?"

[16] As for the derivation of *embu*–questions, there are two main approaches. The first one, suggested by Agouraki (2010), Grohmann et al. (2006) and Tsiplakou et al. (2005), assumes that *embu*–structures are cleft structures. The second one, adopted by Grohmann and Papadopoulou (2011) assumes that *embu*–structures involve a "fossilized" complementizer, which fills the interrogative C. I will return to the syntax of *embu*–clauses in the next section.

[17] It is assumed that constructions involving the dialectal element *embu* are clefts and that the form *embu* derives from the contraction of the copula *en* ("is") with the factive complementizer *pu* ("that"). Therefore, the transliteration in the examples both in this section and the following one are in accordance with this assumption.

(29) Pcu (mathiti) (embu) to edhokes?
Who–GEN (student–GEN) is–3S COMP it–CL.ACC gave–2S
a. "Whom did you give it to?"
b. "Which student did you give it to?"

(30) Posa (enikia) (embu) epleroses ?
How many–ACC (rents–ACC) is–3S COMP paid–2S
a. "How much did you pay?"
b. "How much rent did you pay?"

(31) Ti (traghudhi) (embu) ipes?
What (song) is–3S COMP said–2S
a. "What did you say?"
b. "Which song did you sing?"

Wh–questions in both CG and SMG can also be headed by quasi–arguments, like *pu* / *pothen* ("where") and *pote* ("when"), as well as by true adjuncts, like *pos* ("how"), and *jati* ("why") (32). The distribution of wh–words used for question formation in CG is the same in matrix and embedded clauses. A comparison of the matrix clause in (27) with its corresponding embedded structure in (33) is indicative.

(32) Pu / Pothen / Pote / Pos / Jati (embu) irte ?
Where / When / How / Why is–3S COMP came–3S
"Where/When/How/Why did s/he come?"

(33) Arotise pcos (mathitis) (embu) irte.
Asked–3S who–NOM (student–NOM) is–3S COMP came–3S
a. "S/he asked who came."
b. "S/he asked which student came."

As shown in the above examples, both CG and SMG typically exhibit the ex situ strategy for wh–question formation, i.e. the wh–element undergoes movement from the position where it is merged into the left periphery. The landing site of the moved wh–expression in CG is assumed to be the specifier of

COp. In situ questions are also licit in both CG (Grohmann & Papadopoulou 2011) and SMG (Vlachos 2010), under certain pragmatic and/or discourse–related conditions. Examples (27–31) can be felicitously constructed as in situ questions as well; the only difference being that the dialectal element *embu* cannot be involved in in situ questions. Take for example the ex situ question in (29), which can also appear as an in situ question (34). Its interpretation remains unaltered. Observe, though, the different pattern for clitic placement in (29) as compared to (34), an issue to which I return in chapter 3.

(34) Edhokes to pcu (mathiti)?
Gave–2S it–CL.ACC who–GEN (student–GEN)
"You gave it to which student?"

As shown in examples (27–32), a number of wh–words used for question formation in CG are identical to their SMG counterparts, modulo phonological differences. However, there are also some CG–specific wh–words, namely *inda*[18] ("what" / "what for", "why") and *indalos* ("how"). *Inda* in CG corresponds to both an adverb meaning "why" (35) and a pronoun invariant in gender, number and case. Argumental *inda* can be used either pronominally (36) or pre–nominally in complex wh–expressions, i.e. as a quantifier that has scope over some NP (37). When argumental *inda* is used pronominally it is obligatorily followed by *mbu* (36) and they together form *indambu*[19] (Grohmann et al. 2006, Grohmann & Papadopoulou 2011, Tsiplakou et al. 2005). *Inda* cannot appear in in situ questions, unless it is used pre–nominally (38), in which case its co–occurrence with *(e)mbu* is excluded.

[18] Grohmann and Papadopoulou (2011) cite Simeonidis (2006:217), who indicates that historically *inda* derives from the interrogative pronoun *tinda* "what" that was used in Assizes (a corpus of texts that constituted the legislation for the island of Cyprus in the Middle Ages, when the island was under the dominance of Franks (1191–1489)).

[19] The status of *indambu* depends on the theory one adopts for its derivation. There is no consensus in the literature. Grohmann and Papadopoulou (2011) consider *indambu* a grammaticalized form, while Pavlou (2009) assumes that *inda* and *(e)mbu* combine syntactically to form a cleft. For Grohmann and Papadopoulou *indambu* constitutes a fossilized form merged in or moved to the left periphery of the cleft as a unit. Given that an account that satisfactorily accommodates *indambu* is still pending, I do not provide transliterations for *mbu* in the given examples so that their interpretation is not bound by any ad hoc assumptions concerning the status of *indambu*.

(35) Inda (mbu) irte ?
Why / what for MBU came–3S
"What did s/he come for?"

(36) Inda *(mbu) ipe?
What MBU said–3S
"What did s/he say?"

(37) Inda doro (embu) efere?
What present–ACC is–3S COMP brought–3S
"What present did s/he bring?"

(38) Eferen inda doro (*embu)?
Brought–3S what present–ACC is–3S COMP
"S/he brought what present?"

Another CG wh–word used in question formation is *indalo(i)s*, a derivative of *inda*, a manner adverb that has the same meaning as *pos* ("how") (39). *Indalo(i)s* can only appear in ex situ questions and optionally combines with *(e)mbu*. The distribution of *inda* and *indalo(i)s* is identical in matrix and embedded clauses.

(39) Indalo(i)s (embu) to efere?
How is–3S COMP it–CL–ACC brought–3S
"How did s/he bring it?"

In a nutshell, in cases in which CG and SMG share the wh–word, wh–formation is also similar; this, of course, excludes the formation of interrogative clefts in CG. In this respect, it is not necessary to differentiate the CG CP from the SMG CP. However, wh–question formation in CG may also involve CG wh–words, and/or the dialectal element *(e)mbu*. The syntax of questions headed by *inda* differs from that of other wh–structures. Even so, a satisfactory account of the properties of *inda* and the syntax of *inda*–clauses is still pending. Moreover, the availability of *(e)mbu* in CG is an important point of divergence from the

standard variety[20]. The co–occurrence of *embu* with wh–words points to important differences in the derivation of the relevant constructions. In particular, it is assumed that interrogatives involving *(e)mbu* employ the clefting strategy (Agouraki 2010, Grohmann et al. 2006, Tsiplakou et al. 2005). The next section discusses the syntax of clefts and revisits the structure of the CG CP.

1.5. Clefts

This section presents the clefting strategy in CG, which is absent from SMG, in order to illustrate whether further modifications in the CG clausal structure are required in order to accommodate these facts. The discussion revolves around the syntax of structures involving the dialectal element *embu* that have been treated as clefts by Agouraki (2010), Grohmann et al. (2006) and Tsiplakou et al. (2005). As mentioned in the previous section, CG has two strategies available for wh–question formation: the first involves wh–fronting and is shared by both CG and SMG, and the alternative option, available in CG alone, involves the use of *embu*.

Consider the examples (27–33) from the previous section. (33), cited below as (40), and (41) illustrate the distribution of *(e)mbu*, which is identical in matrix and embedded clauses. Its use in CG wh–questions is optional, unless the

[20] There are three important parameters concerning the presence of *(e)mbu* in CG wh–questions, as indicated in the literature (Grohmann et al. 2006, Grohmann & Papadopoulou 2011, Tsiplakou et al. 2005). First, *embu* is excluded from in situ questions, even in cases where the wh–expression involved allows in situ question formation (see (38) for example). Second, it may optionally appear in ex situ questions, unless the wh–word is bare and argumental *inda*, in which case the presence of *mbu* is obligatory (36). When *mbu* adjoins with *inda*, several phonological variants of *mbu* arise, such as *nambu*, *tambu*, *ambu*, and *innambu* (Pavlou 2009). These reduced forms of *inda (’na, ’ta, ’a)*, together with the fact that *inda* is not a “stand–alone” form (1), could be used as evidence that *inda* displays clitic–like properties (Tsiplakou et al. 2005). Third, the distribution of *(e)mbu* is restricted, as it can only appear either immediately after the wh–word or immediately after the complex wh–expression, which consists of the wh–word and the quantified NP. Grohmann and Papadopoulou (2011) summarise this as in (2).

1. [unintelligible]
   Inda *(mbon(i))?
   mbon(i)<mbu+*en*
   What (it) that is
   “What is it?”
2. a. [$_{CP}$ WH *((e)mbu)* ... *t* $_{WH}$ ...]
   b. *[$_{CP}$ *((e)mbu)* XP *((e)mbu)* ... WH *((e)mbu)* ... *((e)mbu)*]

wh–word involved is bare and argumental *inda*, in which case *mbu* obligatorily follows *inda*[21].

(40) (Arotisen) pcos (embu) irte?
Asked–3S who–NOM is–3S COMP came–3S
"S/he asked who (is it that) came"

(41) (Arotisen) indambu ipe?
Asked–3S what MBU said–3S
"S/he asked what (is it that) s/he said"

Wh–questions involving any wh–word other than *inda*, and declarative clauses involving *embu*, such as (42–43), are unequivocally perceived as clefts in the literature (Agouraki 2010, Grohmann et al. 2006, Tsiplakou et al. 2005). This approach assumes that *embu* derives from the copula *en* (is) that (syntactically) combines with the factive complementizer *pu* and, arguably, in PF (Grohmann et al. 2006), contracts to yield *embu*. The clefted constituent may be an argument (44) or an adjunct (43), while argument–less *embu*–structures are also licit (42).

(42) En pu etilefonise.
Is–3S COMP called–3S
"It is because s/he called"

(43) En ehtes pu etilefonisame.
Is–3S yesterday COMP called–1PL
"It is yesterday that we called"

(44) En / Itan emis pu etilefonisame.
Is/Was–3S us–NOM COMP called–1PL
"It is / was us that called"

The accounts of clefting in CG follow two different lines. The first assumes that the clefted constituent is base–generated in the cleft clause

[21] This shows that *inda*, when used as an argument, does not allow regular wh–fronting like other wh–words but always employs the clefting strategy.

(Agouraki 2010). The second assumes that the clefted constituent is extracted from the *pu*–clause, where it is originally merged, undergoes movement and ultimately adjoins to the Specifier of the cleft clause (Grohmann et al. 2006, Tsiplakou et al. 2005).

Agouraki's (2010) proposal can be summarised as follows: the clefted constituent is not merged in its thematic position and movement does not occur. It is instead base–generated in the cleft clause (2010:553). The direct merging of the clefted constituent in its surface position is seen as an instance of late saturation [22]. For Agouraki, if the C position of the cleft clause is filled by the complementizer *pu*, the Spec CP position cannot be also filled. She suggests instead that the clefted constituent adjoins to the cleft clause. The higher CP comprised of the clefted constituent adjoined to the lower CP is c–selected by a thematically null copula. The clause structure she proposes is shown in (45), following the tree–diagram numbered (28) in Agouraki (2010:553).

(45) $[_{CPm}$ *en* $[_{TPm}$ T $[_{ASPPm}$ ASP $[_{vPm}$ v $[_{VPm}$ V $[_{CPc}$ Clefted Constituent $[_{CPc}$ $[_{C'}$ *pu* $[_{TPc}]]]]]]]]]$[23]

Grohmann et al. (2006) capitalises on the fact that clefts are a focusing strategy and adopts a split–CP analysis involving a Focus projection. As shown in (46) (based on the tree structures numbered (25) and (26) in Grohmann et al. 2006:90–91), the cleft clause is realised in the specifier of the FocP and the matrix clause appears as the complement of C^0. In declarative clefts, the CP–domain of the cleft clause remains empty, while in wh–clefts it is filled with the wh–phrase and an interrogative C^0. In both declarative and wh–clefts, the matrix clause is introduced by the complementizer *pu*. The structure of the cleft clause is given in (47) and involves a Small Clause; in this way the relationship of predication that holds between the focused element and the matrix clause is captured. Moreover,

[22] As for the semantic composition of CG clefts, Agouraki assumes that the cleft clause denotes an incomplete proposition, which is saturated by the clefted constituent (2010:551–552). The latter is interpreted as new information because it is filled in last in the structure.

[23] "Subscript *m* stands for *matrix clause* and subscript *c* stands for *cleft clause*" (Agouraki 2010:553).

the predicate of the Small Clause behaves like a clause–selecting nominal D, such as the Greek determiner *to* ("the") that selects subordinate clauses.

(46) $[_{FocP}$ cleft clause $[_{Foc'}$ Foc^0 $[_{CP}$ $[_{C'}$ C^0 *pu* IP…]]]]

(47) $[_{CP}$ $[_{C'}$ C^0 $[_{IP}$ $[_{I'}$ I^0 *en* $[_{SC}$ DP *o Xambis* DP ~~Θ~~]]]]]

Within such an analysis, declarative clefts like (44) are captured in a straightforward manner: the copula appears in the cleft clause, with the overt subject appearing inside the small clause, while the matrix clause is headed by *pu*. As for interrogative clefts (40), Grohmann et al. (2006) attribute their derivation to the application of sideward movement[24].

Tsiplakou et al.'s (2005) analysis capitalises on the fact that the verbal element *en* does not inflect for number, person, and tense and proposes that *en* involved in focus– and wh–clefts in CG is not copular, but existential. For them, a structure such as *pcos embu irten* is interpreted as "who$_i$ [is it the case [that t_i came]]". In this way, the embedded clause headed by *pu* is not to be treated as a relative clause, but rather as the complement of *en*. Within their analysis the clefted wh– or focused expression is extracted out of the complement of *en*. They further claim that the extracted wh–word checks its disjunctive feature in the Spec of the matrix CP and its existential feature in the Spec of the embedded CP, the *pu*–clause. The movement of the wh–expression from the embedded clause to the matrix clause leaves a wh–feature on the C of the embedded clause, hence the realisation of the complementizer *pu* instead of *oti* or *pos* ("that").

Examples like (44) can be taken as evidence showing that extraction of the clefted constituent out of the *pu*–clause takes place (Tsiplakou et al. 2005). Observe the agreement between the verb of the *pu*–clause (*etilefonisame*–1PL)

[24] Grohmann et al. (2006) propose that the wh–phrase in CG interrogative clefts moves sidewards and the derivation proceeds as follows: the wh–word, i.e. *pcos* in (40) for instance, is merged in its thematic position and it is assigned a θ–role by the verb of the matrix clause. However, it bears an additional θ–role and a wh–feature. Its first θ–role is checked inside the matrix clause, but neither its second θ–role nor its wh–feature can be checked (since the matrix clause is headed by *pu*, a non–interrogative complementizer), therefore the wh–word is copied and placed into the derivational workspace. Once re–merged with the predicate of the small clause, both its second θ–role and, upon subsequent movement to the SpecCP of the cleft clause, its wh–features are checked. As for the copula *en*, it appears as the predicate of the small clause and at PF it is contracted with *pu* to form *embu*.

and the clefted constituent (*emis*–1PL), on the one hand, and the lack of agreement between *itan* (was–3S) and the extracted constituent *emis* (us–1PL) on the other. This constitutes corroborative evidence for Tsiplakou et al.'s (2005) analysis. However, interrogatives headed by *inda*, arguably another type of cleft construction[25], challenge all the analyses for clefting in CG including Tsiplakou et al.'s (2005), since none can satisfactorily account for the derivation of *indambu*.

Turning now to the structure of the CG clause, as outlined in (26), the accounts by Agouraki (2010) and Tsiplakou et al. (2005) do not require the postulation of additional functional projections, while Grohmann et al.'s (2006) analysis requires a Focus projection. It is as yet unclear why the clefted constituent cannot adjoin to the COp head in Grohmann et al.'s (2006) analysis as well, together with other pre–verbal stressed constituents, following proposals in Agouraki (2010); this would render a Focus head unnecessary. In the absence of corroborative evidence for its presence in the CG CP, I assume that the clause structure in (26) suffices[26] for accommodating CG clefts as well. The CG CP (26) differs from the SMG CP (1) in a crucial respect: only the latter involves a Focus head. Thus, while focused constructions in SMG involve movement of the focused element to FocP, in CG the clefting strategy is used instead.

1.6. Summary

The discussion in this chapter revolved around the properties and the distribution of modal and negative particles, the (non–)realisation of the Topic and Focus projections, wh–question formation, and the syntax of clefts in CG. This led to the formulation of the CG clause structure outlined in (26). Having sketched the basic aspects of the syntax of CG, I will now proceed to a discussion of the properties and the syntax of constructions involving clitic pronouns, in chapters 2 and 3 respectively.

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[25] If *inda* followed either of the clefting strategies described above, it would co–occur with *embu*. However, it does not combine with *embu* either as an argument or as an adjunct.

[26] However, the specifics of the clefting strategy in CG point to important differences presumably concerning the feature specification of the relevant functional projections. These differences are only evident upon a careful investigation of the syntax of CG clefts. This issue is beyond the scope of the current thesis, and is left for future research.

CHAPTER 2: CYPRIOT GREEK CLITIC PRONOUNS

2.1. Introduction

This chapter describes the system of clitic pronouns in adult CG, which constitutes the target grammar for CG–speaking children. The discussion is organised as follows: the first section presents the main properties of CG clitics, including their morphological paradigm, their distribution and their behaviour with respect to coordination and modification, their semantic and phonological properties, and their categorial status. The second section deals with issues related to clitic placement. It constitutes an overview of the proclisis and enclisis contexts in CG for single clitics and clitic clusters in both matrix and embedded environments; the syntactic contexts that allow free ordering are also discussed. CG is compared with languages exhibiting second position (2P) restrictions, like Serbo–Croatian, and languages with similar clitic ordering, like European Portuguese and Galician.

2.2. Basic properties of CG clitics

This section presents the morphological paradigm of CG clitics as well as their phonological, semantic and syntactic properties. The discussion of the basic properties of clitics in CG uses the criteria for distinguishing clitics and strong pronouns proposed by Mavrogiorgos (2009) and Tsimpli and Stavrakaki (1999) to describe the counterpart clitic system in SMG. Based on the tripartite typology of Cardinaletti and Starke (1999) and Kayne's (1975) criteria, Mavrogiorgos (2009) applies (a) morphological (morphological deficiency) (see also Tsimpli & Stavrakaki 1999), (b) syntactic (distribution, coordination, modification, X^0 vs. XP properties), (c) semantic (animacy/human, referential properties, impersonal, expletive and non–referential uses) (see also Tsimpli & Stavrakaki 1999) and (d) (morpho)–phonological criteria (sandhi rules, prosodic restructuring, inherent

stress) to SMG clitics in order to demonstrate the respects in which they differ from strong pronouns. The application of Mavrogiorgos' and Tsimpli and Stavrakaki's criteria to the CG clitic system will highlight the points of convergence and divergence between CG and SMG. Pronominal clitics in CG and SMG share morpho–phonological and semantic properties, while their main differences lie on the syntactic level.

2.2.1. The morphological paradigm

CG, like SMG, has two types of personal pronouns: strong pronouns and clitics. The morphological paradigm of clitic and strong pronouns is given in tables 2.1 and 2.2 respectively. Pronominal clitics in Greek, both in CG and SMG, function as (i) direct and indirect objects to verbs, as in (3), (ii) complements to nouns (*to vivlio mu* (the book my–CL.POSS)), adjectives (*kaliteros mu* (better (than) me–CL.GEN)), determiners (*enan tus* (one (of) them–CL.GEN)) and quantifiers (*kathenas mas* (each (one of) us–CL.GEN)), and (iii) complements to adverbs (*konda mu* (close (to) me–CL.GEN)) (Holton et al. 1997:303–307). This thesis is concerned with the acquisition of object clitic pronouns in CG, and therefore the term *clitic* in the remainder of this thesis will be used to refer to clitic pronouns that function as (in)direct objects to verbs.

Number / Case	1st person	2nd person	3rd person		
			Masculine	Feminine	Neuter
Singular					
Genitive	mu	su	tu	tis	tu
Accusative	me	se	to(n)	ti(n)	to
Plural					
Genitive	mas	sas	tus	tus	tus
Accusative	mas	sas	tus	tes	ta

Table 2.1: The morphological paradigm of CG clitic pronouns.

Number / Case	1st person	2nd person	3rd person		
			Masculine	Feminine	Neuter
Singular					
Nominative	egho	esi/u	tutos	tuti	tuto
Genitive	emena(n)	esena(n)	tutu	tutis	tutu
Accusative	emena(n)	esena(n)	tuto(n)	tuti(n)	tuto
Plural					
Nominative	emis	esis	tuti	tutes	tuta
Genitive	emas	esas	tutus	tutus	tutus
Accusative	emas	esas	tutus	tutes	tuta

Table 2.2: The morphological paradigm of CG strong pronouns.

Both strong and clitic pronouns substitute for full NPs (1). Two representative examples with clauses involving strong and clitic pronouns are offered in (2) and (3) respectively. Taking into account that, on the one hand, CG (in fact, Greek in general) only has pronominal clitics, as it lacks the reflexive and auxiliary clitics of the Spanish/Italian and Serbo–Croatian type respectively (Terzi 1999a:86, footnote 2), and on the other, that it only has object clitics, the term *clitic(s)* will henceforth exclusively refer to pronominal object clitics[1].

(1) Eferen to vivlio.
Brought–3S the book–ACC
"S/he brought the book"

(2) Tuton eferen.
This–ACC brought–3S
"S/he brought this"

(3) Eferen tu to.
Brought–3S him–CL.GEN it–CL.ACC
"S/he brought it to him"

The discussion of the status and properties of clitics in CG will reveal their structural deficiency, in Cardinaletti and Starke's (1999) sense, as compared to

[1] Both CG and SMG have pro subject pronouns as well, which will not, however, be discussed in this thesis.

strong pronouns. This deficiency is reflected in their morphological, syntactic, phonological and semantic properties.

Let us start with their morphological composition. A comparison of tables 2.1 and 2.2 shows that the two series of personal pronouns in CG carry almost identical nominal features: they are both marked for nominal inflectional features, such as case (nominative (for strong pronouns only), accusative and genitive, which has taken over the uses of the old dative), number (singular and plural) and person (1st, 2nd and 3rd). The 3rd person forms of both strong and clitic pronouns are also inflected for gender (masculine, feminine and neuter). The strong pronoun forms in 3rd singular and plural are in essence demonstrative forms, like their counterpart SMG forms (Mavrogiorgos 2009:14), and are declined as adjectival forms ending in *–os, –i, –o*.

Mavrogiorgos indicates that although it is not a trivial task to match features such as number, gender or case with their morphological exponents due to the fusional character of the language, there is sufficient evidence that the segments /m/, /s/ and /t/ realise a person feature (2009:20–22) in SMG. His claim applies to CG as well: notice the presence of /m/ in all 1st person forms in tables 2.1 and 2.2, with the exception of *egho*, as well as the presence of /s/ and /t/ in all 2nd and 3rd person forms. As Mavrogiorgos points out, /m/, /s/ and /t/ mark the 1st, 2nd, and 3rd person, respectively, across nominal and verbal paradigms in SMG; this claim holds for CG as well[2].

Turning now to case, the genitive (singular and plural) object clitic pronoun forms (table 2.1) are homophonous with the possessive pronouns. However, Mavrogiorgos (2009:34, footnote 21) offers evidence from Northern Greek dialects showing that their underlying structure differs. It is well known that in Northern Greek dialects the accusative clitic is used in verbal constructions

[2] Mavrogiorgos offers the following two arguments to justify his claim (2009:20–22), both of which apply to CG as well, and hence are exemplified in CG in the following: first, the segments /m/ and /s/ realise the 1st and 2nd person, respectively, in the verbal paradigm of the copula (1st person: *ime, imaste*, 2nd person: *ise, isaste*), and the medio–passive / non–active forms (1st person: *pliniskome, pliniskumaste*, 2nd person: *pliniskese, pliniskeste*). The segment /t/ realises the 3rd person, as is evident from the corresponding medio–passive / non–active present forms in CG: *pliniskete, pliniskunte*. Second, the above segments are found in the corresponding persons in the possessive pronoun paradigm as well (/m/ in the 1st person: *mu, mas*, /s/ in the 2nd person: *su, sas* and /t/ in the 3rd person: *tu, tus*).

instead of the dative clitic, i.e. "*Me* (ACC) *ekane*" ((S/he) did to me) (Northern Greek dialects) vs. "*Mu* (GEN) *ekane*" (SMG) and "*Ekame mu* (GEN)" (CG). Nevertheless, with regard to the possessive pronouns, Northern Greek dialects pattern like SMG and CG in using the genitive form of the clitic, i.e. *o pateras mu* (the–NOM father–NOM my–POSS), *to vivlio tis* (the–NOM book–NOM her–POSS).

A direct comparison of the corresponding cells in tables 2.1 and 2.2 shows that clitic and strong pronouns in CG are morphologically distinct but related. In fact, the clitic forms constitute the reduced morphological variants of the corresponding strong forms[3]. For Tsimpli and Stavrakaki (1999:37–39) the third person clitic pronoun in SMG is a reduced form of the (strong) pronoun *afton, aftin, afto* and, in their view, this reduction in the number of morphemes of clitic pronouns illustrates their morphological deficiency as compared to strong pronouns. An analogous claim can be put forward for CG clitics as well. In both tables, there are some cells that share the same form. For example, in the clitic paradigm, the same form realises both the genitive and the accusative case of the 1st (*mas*) and 2nd person plural (*sas*). Moreover, the form *tus* is used for the genitive case of all three genders in 3rd person plural, as well as for the accusative case of the masculine. The aforementioned cases constitute syncretic forms, namely forms that spell out more than one cell in the morphological paradigm.

One of the most important and obvious differences between strong and clitic pronouns in CG and SMG alike, as indicated by Mavrogiorgos (2009:13–15), is their morpho–phonological composition. Firstly, in terms of syllable length, while clitics are monosyllabic elements, strong pronouns are at least bi–syllabic. Secondly, strong pronouns carry inherent lexical stress, while clitics are unstressed. Thirdly, only strong pronouns can stand alone in the clause, whereas clitics need some host to cliticise to (see example (14)).

A second difference between strong and clitic pronouns, and in fact their only difference in terms of feature composition, is that CG clitics, unlike strong

[3] This asymmetric morphological relation between strong and clitic forms in the pronoun paradigm is not unusual for European languages. A representative example is the strong–weak–clitic triplet found in Italian (3rd person plural forms: *a loro, loro* and *gli*) which reveals a gradual morphological deficiency from the strong to the weak and finally to the clitic.

pronouns, are not inflected for nominative case. This is a point of divergence of CG from SMG as well. Notably, 3rd person nominative clitic forms are used in SMG, but only in conjunction with either the interrogative *pu(n)* (< pu (where) + 'n (< ine (is)), "where is?") or the deictic *na* ("here/there") (Marinis 2000:261, Mavrogiorgos 2009:15–16). These points are illustrated in examples (4) and (6). Examples (5) and (7) highlight another important point: the interrogative *pu(n)* and the deictic *na* in SMG can also conjoin with a clitic in the accusative form[4]. In CG, on the other hand, no nominative forms of the clitic are used. Like their SMG counterparts, the accusative forms of CG clitics can be used together with *pu(n)* and *e*, the CG dialectal variant of *na*, as shown in examples (5) and (7). In this type of structures the clitic may be doubled by a full NP (4–7).

(4) Pun (< pu + 'n (< ine)) tos (o Stavros)? (SMG)
where is he–CL.NOM the Stavros–NOM

(5) Pun (< pu + 'n (< ine)) ton (to Stavro)? (SMG & CG)
where is he–CL.ACC the Stavros–ACC
"Where is he (Stavros)?"

(6) Na tos (o Stavros)! (SMG)
Here/there he–CL.NOM the Stavros–NOM

(7) E (CG) / Na (SMG) to(n) (to Stavro)!
Here/there he–CL.ACC the Stavros–ACC
"Here/there he is (Stavros)"

Leaving aside the nominative forms that exist only in SMG, the morphological paradigms for clitics in the two varieties extensively overlap[5]. This convergence is illustrated by a direct comparison between table 2.1 above for CG clitics and the morphological paradigm of SMG clitics given by Mavrogiorgos (2009:15, table 1), Revithiadou and Spyropoulos (2008), Tsimpli and Stavrakaki (1999:36, table 2) among others.

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[4] Apart from 3rd person clitics, in SMG, 1st and 2nd person clitics can also conjoin with *na* as in *Na me!* (Here I am) and *Na sas!* (Here you (PL) are).

[5] Another difference concerns the genitive plural form of the feminine 3rd person clitic: while in SMG both *tis* and *tes* are available, in CG only the form *tes* is licit.

The genitive and accusative 3rd person singular forms, as well as the 3rd person accusative plural form of the clitic paradigm, are homophonous with the corresponding forms of the definite article (table 2.3). However, this is not a unique property of CG. Uriagereka (1995) observes that articles and 3rd person accusative clitics in Romance look alike morphologically and behave alike in syntactic and semantic respects. The morphological paradigms of determiners and (3rd person) clitic pronouns extensively overlap in SMG (Mavrogiorgos 2009:19–20, Tsimpli & Stavrakaki 1999:36), Galician (Uriagereka 1995:81) and Italian (Guasti 1993/4:18) inter alia.

Number / Case	Masculine	Feminine	Neuter
Singular			
Nominative	o	i	to
Genitive	tu	tis	tu
Accusative	to(n)	ti(n)	to
Plural			
Nominative	i	i	ta
Genitive	ton	ton	ton
Accusative	tus	tes	ta

Table 2.3: The morphological paradigm of definite articles in CG.

3rd person strong pronouns in CG and SMG alike pattern like real demonstratives. Mavrogiorgos (2009:26, footnote 14) and Tsimpli and Stavrakaki (1999:37) describe their properties as follows. First, they can be used either as pronouns (*Tutos irte* "This came") or as adjectives (*Tutos o psilos irte* "This, the tall one, came"). Second, they may have a deictic or an anaphoric use. In their anaphoric use, as shown in (8), the referent is provided by the linguistic context. In their deictic use, their referent is identified by various indices in the extra–linguistic context, such as locative adverbs *dhame* ('here') and *dzame* ('there') used together with strong pronouns; the former is used together with *tutos* (9), while the latter is used together with *dzinos* (10).

(8) O Stavros en tutos o psilos.
The Stavros–NOM is–3S him–NOM the tall–NOM
"Stavros, he is the tall one"

(9) Tutos dhame irten protos.
He–NOM here came–3S first–NOM
"He over here came first"

(10) Dzinos dzame irten protos.
He–NOM there came–3S first–NOM
"He over there came first"

As for the morpho–syntactic status of clitic pronouns in CG, it is well known that, cross–linguistically, clitics are both word–like and affix–like elements[6]. Clitics in CG pattern with their counterpart forms in Romance and SMG: they have at the same time properties typically related to word–level elements, such as the ability to bind antecedents, as well as properties typically found in affixes, such as the application of phonological rules in clitic–verb combinations. Crucially, CG clitics and SMG clitics alike can co–occur with full DPs in Clitic Doubling (CD) constructions. This has been used as an argument in favour of the claim that Greek clitics are not real arguments but agreement markers. Of course, being an agreement marker does not entail an affix–like status, since not all agreement markers are bound morphemes.

Philippaki–Warburton and Spyropoulos (1999) argue against the affixal status of clitics in SMG on the basis of phonological and morphological evidence and claim that clitics behave as the arguments proper of the clause. Revithiadou and Spyropoulos (2008) provide further evidence for the argumental status of clitics on the basis of CD constructions. In particular, they argue that the clitic–doubled DP objects are out–of–cycle elements and do not exhibit argument properties[7], while the object role is undertaken by the clitic.

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[6] The idea that clitics are affixes (either word–level or phrasal–level) and, hence, morphological parts of their hosts constitutes the basic tenet of lexicalist accounts. Syntactic accounts, on the other hand, do not consider clitics parts of their hosts, but rather independent words or morphemes (Mavrogiorgos 2009:61–62; see section 2.2.3 for an argumentation in favour of syntactic accounts).

[7] Revithiadou and Spyropoulos (2008) claim that the following facts justify their claim that clitic–doubled DP–objects have been deprived of their argument status: first, they cannot be focalised. Second, no extraction can be manifested from within a clitic–doubled DP–object. Third, phonological evidence shows that the clitic–doubled DP–object is mapped onto a separate prosodic constituent from that which the verb is mapped onto.

Given the close resemblance between CG and SMG clitics at the morphological level, their similar behaviour in Clitic Doubling constructions, and the syntactic and semantic properties they share (as will be made obvious in subsequent sections), I take Mavrogiorgos' (2009) and Revithiadou and Spyropoulos' (2008) claim that SMG clitics are independent words / morphemes to hold for CG clitics as well. I now turn to their distribution.

2.2.2. Distribution

CG clitics (both single and clitic clusters) are obligatorily verb adjacent and no other element can appear between the clitic and its host (11–12). Hence, CG lacks interpolation, found in languages such as Serbo–Croatian (Terzi 1999b), where the clitic and the verb may be separated by some other element. Two patterns of clitic placement are available in CG: proclisis and enclisis, exemplified in (12) and (11) respectively. In this chapter, the notions of proclisis and enclisis have only descriptive value and refer to clitic placement with respect to the verbal host: the former refers to the pattern with the object clitic immediately preceding the finite verb and the latter refers to the pattern with the object clitic immediately following the finite verb.

(11) Eferen (*amesos / *i Maria) to
Brought–3S immediately the Mary–NOM it–CL.ACC
(amesos / i Maria).
"S/he (Mary) (immediately) brought it"

(12) Prepi na (*amesos / *i Maria) to feri (amesos / i Maria)
Must M it–CL.ACC bring–3S
"S/he (Mary) must bring it (immediately)"

If we consider the requirement of CG clitics for verb adjacency, it straightforwardly follows that they cannot appear in isolation. As shown in examples (13–14), only strong pronouns or full NPs, but crucially not clitics, can

be involved in verb–less clauses used as answers in narrow–focus questions, even if their antecedents are established in the discourse.

(13) Ti eferes?
What brought–2S
"What did you bring?"

(14) *To / Tuto / To aftokinito.
it–CL.ACC / this–ACC / the car–ACC
"It (*CL / strong pronoun) / The car"

As already mentioned in chapter 1, clitic pronouns in CG can appear in Clitic Doubling (CD) and Clitic Left (CLLD) and Right Dislocation (CLRD) in which they double overt DP–objects. Just as in the counterpart structures in SMG (Revithiadou & Spyropoulos 2008), the clitic–doubled DP–object can appear in clause initial, medial or final position (15).

(15) (To vivlio) eferen to (to vivlio) i Maria (to vivlio)
The book–ACC brought–3S it–CL.ACC the Mary–NOM
"As for the book, Mary brought it"

Unlike strong pronouns and full NPs, clitic pronouns cannot focalise. In terms of structure building, this implies that they never adjoin to a Focus projection. As has been argued in the previous chapter, CG lacks syntactic focus movement and the CG CP does not involve a Focus head (Agouraki 2010). In CG, in lieu of focus constructions, it–clefts are employed, while structures involving stressed constituents in the left periphery of the clause are also licit. Examples (16) and (17) constitute constructions involving stressed constituents and it–clefts respectively, and reveal the discrepancy between strong pronouns and full NPs, which are licit in both construction types, and clitic pronouns, which are banned from both. Moreover, as shown in (18) and (19), clitics are not compatible with focalised / stressed strong pronouns or full NPs involved in CD (19), CLLD (18)

or CLRD (19) constructions, as they cannot double focalised / stressed strong pronouns or full NPs (see Theophanopoulou–Kontou 1986/1987, Tsimpli 1995).

(16) *TO / TUTO / TO VIVLIO thelo.
it–CL.ACC / this–ACC / the book–ACC want–1S
"It / This / The book I want"

(17) En *TO / TUTO / TO VIVLIO pu thelo.
Is–3S COMP want–1S
"It is it / this / the book that I want"

(18) *TO VIVLIO / To vivlio thelo to.
The book–ACC want–1S it–CL.ACC
"The book, I want it"

(19) Thelo to ([PAUSE])[8] *TO VIVLIO / to vivlio.
"I want it (,) the book"

However, a clarification needs to be made in relation to clitics' incompatibility with emphatic stress. Despite the fact that clitics are typically unstressed elements and cannot focalise or be used emphatically, under certain conditions they can be semantically focused and hence can bear emphatic stress. This can only happen when they are involved in constructions under the repair/correction interpretation, such as (20) for instance. Notably, in order for this type of construction to be felicitously uttered, both of its constituent parts must be present, i.e. the part including the old/known information ("*na MU pis*") as well as the corrected part ("*na TIS pis*").

(20) Na TIS pis, oi na MU pis.
M her–CL.GEN tell–2S NEG M me–CL.GEN
"You should tell HER, not me"

[8] The presence or the absence of a pause immediately after the left dislocated NP renders the structure a CLRD or a CD construction (see chapter 1 for a discussion of Anagnostopoulou's (2006:546−547) diagnostic for differentiating between the two).

Mavrogiorgos calls this type of focus "meta–grammatical" (2009:56, footnote 40), and he indicates that its difference from contrastive focus is that only the latter seems to have semantic properties. Notably, this type of focus may apply to sub–parts of words as well, as in "TheLIS, oi theLUN" ((You) want, not (they) want), which shows that there is no requirement for the focused constituent to be inherently stressed.

2.2.3. Coordination and Modification

Clitic pronouns in CG cannot be coordinated and cannot be modified, unlike strong pronouns and full NPs which pattern alike in this respect. Examples (21) and (22) illustrate the behaviour of clitics versus strong pronouns and full NPs with regard to coordination and modification respectively. This divergence between strong pronouns and full NPs, on the one hand, and clitic pronouns on the other has led Cardinaletti and Starke (1999) and Mavrogiorgos (2009) to include coordination and modification among the syntactic criteria for the classification of pronominal elements.

(21) Ksero tuton / to mitsin / *to dze
Know–1S him–ACC / the boy–ACC / him–CL.ACC and
tutin / tin koruan / *tin.
her–ACC / the girl–ACC / her–CL.ACC
"I know him (strong pronoun) / the boy / *him (CL) and her (strong pronoun) / the girl / *her (CL)"

(22) Mono tuton / to mitsin / *to ksero.
Only him–ACC / the boy–ACC / him–CL.ACC know–1S
"I only know him (strong pronoun) / the boy / him (CL)"

2.2.4. Semantic properties

CG clitics exhibit similar semantic properties to SMG clitics (Mavrogiorgos 2009, Tsimpli & Stavrakaki 1999): they can be either referential or non–referential,

while they can be also used deictically. As adequately described by Mavrogiorgos, in their referential use clitic pronouns are anaphoric, "in the sense that they pick up their referent via a prominent antecedent, which is provided by the previous immediate linguistic context" (2009:33), as in example (23). Tsimpli and Stavrakaki note that clitics, due to their lack of a referential index, refer by virtue of their ability to point (via indexing) to an antecedent, which, in turn, refers to an individual in the discourse, in Cardinaletti and Starke's (1999) terms (1999:39). Clitics may be also used deictically, as in example (24), in which case their referent is identified in either of the following ways: the utterance may be accompanied by pointing or the antecedent may be sufficiently salient in the discourse (Tsimpli & Stavrakaki 1999:38).

(23) O Stavros en o andras mu.
The Stavros–NOM is–3S the husband–NOM my–POSS
Eksanaghnorises ton ?
Re–meet–2S him–CL.ACC
"Stavros is my husband. Have you met him again?"

(24) Kseris tin?
Know–2S her–CL.ACC
"Do you know her?"

In relation to the anaphoric and deictic uses of the clitic pronouns, it is worth mentioning Heim and Kratzer's (1998) contention that they are not really distinct, given that in both cases the clitic is assigned its referent via co–reference with a prominent antecedent (cited in Mavrogiorgos 2009:33, footnote 20). This ties in with the inherent property of clitic pronouns that they refer to entities already established in the discourse (Tsimpli & Stavrakaki 1999:38). It is in this sense that Mavrogiorgos considers them topicalizers. In his own wording, a clitic constitutes a definite head "optionally merged in the left periphery of the (direct or indirect) object DP of the clause rendering it a topic" (2009:9).

CG clitics can also be non–referential. Mavrogiorgos (2009) mentions three types of non–referential uses in SMG (see also Tsimpli & Stavrakaki

1999:38), all of which are operative in CG as well. CG clitics may be used as variables bound either by non–referential antecedents, such as quantifiers as in (25), or by referential antecedents, such as proper nouns[9]. This is illustrated in example (26), where the clitic in the elided conjunct may receive, apart from a strict reading, a sloppy identity reading. In the former case, it will be bound by the subject of the first clause (a), while in the latter case, it will be bound by the index of the subject of the second clause (b). In addition, 3rd person clitics can be used in idioms. In these uses, the clitic alone has no antecedent, but it combines with the verb to form an idiom (27–29). Some expressions may be ambiguous between an idiomatic and a literal interpretation (28–29), while for others the only available interpretation is the idiomatic one (27).

(25) Kathe athropos kamni dzino pu ton / tu
Every man–NOM do–3S this–ACC COMP him–CL.ACC / DAT
simferi.
is–3S in his interest
"Every man does what is in his interest"

(26) O Stavros ipen oti ton peripezi.
The Stavros–NOM said–3S COMP him–CL.ACC fool–3S
Dze o Marios to idhio.
And the Marios–NOM the same
a. "Stavros$_i$ said that s/he fools him$_i$. And Marios$_{ii}$ also [=said that s/he fools him$_i$]" (strict)
b. "Stavros$_i$ said that s/he fools him$_i$. And Marios$_{ii}$ also [=said that s/he fools him$_{ii}$]" (sloppy)

(27) Idhen tin arhighos.
Saw–1S her–CL.ACC chief–NOM
"S/he behaves as if s/he is the chief" (idiomatic)

(28) Ipan mas tin.
Told–3PL us–CL.GEN her–CL.ACC

[9] See Theophanopoulou–Kontou (1986/1987) and Tsimpli (1999) for a discussion on the distribution of clitic pronouns and null pro in restrictive and non-restrictive relatives and interrogatives.

a. “They told it to us” (literal)

b. “We were told off (by them)” (idiomatic)

(29) Epira ta.

Took–1S them–CL.ACC

a. “I took them” (literal)

b. “I was furious” (idiomatic)

Human reference and coordination are the two criteria that have been proposed by Cardinaletti and Starke (1999) for pronoun classification. According to them, both strong and clitic pronouns fall into the following two pronoun classes, regardless of whether they are morphologically distinct: class 1 pronouns can be coordinated but can only have human referents, while class 2 pronouns cannot be coordinated but can have both human and non–human referents. Class 1 pronouns may only be strong pronouns, while both weak and clitic pronouns fall into class 2. Clitic pronouns in CG cannot be coordinated, while their referents can be either human or non–human entities. Therefore, CG clitics fall into class 2 of Cardinaletti and Starke’s classification, together with SMG clitics (Mavrogiorgos 2009:26).

The criteria for pronoun classification proposed by Cardinaletti and Starke (1999) are not applicable to all clitic pronouns in CG. 1st and 2nd person pronouns have the inherent property of realising human entities alone, as they refer to the speaker and the addressee respectively, thus the human reference criterion is not applicable in their case. However, if the aforementioned criteria for inclusion in class 2 are applied to 3rd person CG clitics, both are fulfilled.

In sum, the semantics of clitic pronouns in CG can be characterised as follows: they can be referential or non–referential, can refer both to human and non–human entities, they can be bound variables or free pronouns and can be used idiomatically, and their antecedents must be prominent in the discourse.

2.2.5. Phonological properties

Focusing on the phonological properties of CG clitics, I will try to illustrate the properties that determine their realisation as parts of a Prosodic Word (henceforth PrW). Following Revithiadou (2006, 2008), I will first briefly outline some basic aspects of CG phonology[10] and will then focus on the prosodic properties of CG clitics.

The description I give of the prosodic system in CG, largely based on Revithiadou (2006:83–84), focuses on various aspects of the phonological component at the lexical and post–lexical level. At the lexical level, CG, like SMG, has a three–syllable stress window, with default stress on the antepenultimate syllable, as in [eka'tharisen] ("(s/he) cleaned"), unless a lexically determined stress applies on the (pen)ultimate syllable, as in [katha'ros] ("clean"). Moreover, this rule states that no PrW may be stressed beyond the 3rd syllable from the right. An important difference between CG and SMG regarding the three–syllable stress window is that in SMG it is never violated. In contrast, in CG it may be violated, even within a single lexical word, as for example in the proper name *Hadzikiriakos*, that may be pronounced as follows [ha'dzikiriakos]. When CG clitics incorporate in their host's PrW (Revithiadou 2006, 2008), the three–syllable stress window rule is applicable, hence verb–clitic combinations also adhere to it[11]. In effect, they occasionally trigger a secondary/rhythmic stress in order to avoid violation.

At the post–lexical level, a number of sandhi rules are applicable in CG. Such rules only apply within the Prosodic Word (PrW) domain and involve s–voicing assimilation and e–deletion. The following sets of examples (Revithiadou

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[10] With regard to the phonetics of CG, Arvaniti (2010:23–24) points out three characteristics which distinguish it from SMG. The first of these is the phonemic contrast between geminate and single consonants in CG, which is absent from SMG. For example, observe the contrast between the phoneme [n] in *enna* (modality marker used for future formation in CG; see chapter 1), pronounced as a geminate consonant, and in the numeral e*na* ("one"), pronounced as a single consonant. The second is the wide use of the prenasalised voiced stops [^{m}b], [^{n}d] and [^{ŋ}g] in CG that usually replace the SMG voiced stops [b], [d], and [g], respectively. The third is the post–alveolar fricatives [ʃ] and [ʒ], which are part of the phonetic inventory of CG alone.

[11] Cf. Arvaniti (2010) who claims that while in SMG a word stressed on the antepenultimate syllable acquires an enclitic stress when followed by a clitic, CG lacks the enclitic stress of SMG; she gives the following example from CG: [tis ta'ftotitas tu] "his identity" (2010:25).

2006:84) illustrate this point. The first set shows the application of s–voicing, namely the assimilation of a voiceless /s/ to the [+voice] value of the following fricative or nasal. The following PrWs involve the voicing of [s] so that it is pronounced as [z] in front of [m] and [v]: *zmili* (“needle”), *izmini* (“Ismini”, proper name), *prozvallo* (“offend”), *gherazmenos* (“aged”). The next set of examples shows the application of e–deletion, namely the deletion of the first unstressed /e/ in a sequence of occurrences of the same phoneme, provided that the resulting cluster is phonotactically well–formed: *puliste* (<pulis–ete “sell”), *ferte* (<fer–ete “bring”), but *ghrapsete/*ghrapste* (<ghraps–ete “sell”). Both the above rules are applicable in clitic constructions as well.

Turning now to CG clitics, I start from their well–known properties, namely their unstressed and monosyllabic status, and discuss some issues in relation to the former. Even though clitics are typically unstressed, under certain conditions they may appear stressed. One such case is when they are involved in corrective constructions; see discussion in section 2.2.2 and example (20).

Another case in which clitics bear stress is when hiatus resolution applies. Hiatus resolution is the coalescence of the final vowel of the clitic and the initial vowel of the verb. The clitic–verb cluster in the following example /en tu to edhoka/ (NEG him–CL.GEN it–CL.ACC gave) may be pronounced as follows: ['en.tu.to.'e.δo.ka]. However, if hiatus resolution is applied, vowel deletion (of phoneme [e] heading the initial syllable of the verb) takes place followed by prosodic restructuring, and the clitic–verb cluster is pronounced as follows: ['en.tu.'to.δo.ka]. In the latter case, the clitic ends up carrying the lexical stress of the PrW within which it is realised together with its verbal host.

Crucially, the clitic does not bear inherent/lexical stress either in corrective constructions or in utterances in which hiatus resolution applies. In corrective constructions it bears meta–grammatical focus, which, as was previously mentioned, is not contingent on the availability of inherent stress. In clauses involving hiatus resolution, stress shift applies from the verb to the clitic upon the application of a phonological process.

CG clitics, on a par with their SMG counterparts, are monosyllabic and morpho–phonologically deficient elements (in terms of syllable structure), hence

they do not form a foot. In effect, they lack inherent/lexical stress. On the basis of the Metrical Stress Theory (Liberman & Prince 1977), stress is assigned to a syllable within a foot. Moreover, clitic pronouns in CG cannot form PrWs, which, according to the Prosodic Hierarchy (Selkirk 1995), are the minimal prosodic constituents onto which a morpho–syntactic constituent may be mapped. PrWs must at least contain a foot, hence the inability of CG clitics to form PrWs. Since CG clitics (along with their SMG counterparts) cannot form PrWs on their own, they obligatorily restructure into a (verbal) host.

On the basis of the discussion so far, I assume that CG clitics are inherently unstressed and prosodically deficient elements, which need to cliticise, and hence prosodically restructure into their host. Evidence for the fact that CG clitics form a PrW together with their host is offered by the application of sandhi rules in clitic–host combinations. Recall that sandhi rules are only applicable within PrWs. S–voicing for example can apply in clitic–verb clusters, either in proclisis (30) or in enclisis (31) contexts.

(30) Enna mas mundari (‿ mazmu'ndari).
M us–CL.ACC attack–3S
“S/he will attack us”

(31) Edhokes mu (‿ 'edhokezmu).
Gave–2S me–CL.GEN
“You gave me”

E–deletion in CG typically applies to the ending of the 2nd person singular of the imperative verb (stress–less vowel [e]), when followed by a clitic pronoun, as in (32). This process may also be combined with s–voicing, as in (33). E–deletion is an optional process in SMG (Mavrogiorgos 2009), whereas in CG it is subject to the phonotactic well–formedness of the resulting cluster; compare ['afisto] (“leave it”), ['thkjavasto] (“read it”) and ['ferto] (“bring it”) with ['kapse to] (“burn it”), ['kopse to] (“cut it”) and ['filakse to] (“hide it”). Nevertheless, e–deletion seems to have wider application on verb–clitic clusters in SMG than in CG: compare ['kopsto], ['kapsto] and ['filaksto] SMG/*CG.

(32) Fer (<fere) mu lefta.
Bring–2S me–CL.GEN money–ACC
“Bring me money”

(33) A(f)ise mu (‿ 'a(f)izmu) lefta.
Leave–2S me–CL.GEN money–ACC
“Leave money for me”

As Revithiadou (2006:84) observes, in CG (and SMG alike) a secondary/rhythmic stress is developed to repair violations of the three–syllable stress window caused by the addition of a clitic pronoun. Specifically, apart from the stress on the syllable prior to the antepenultimate syllable, a secondary stress is applied to the penultimate syllable, either the last syllable of a polysyllabic verb or the 1st syllable of the enclitic. The following examples taken from Revithiadou (2006:84) illustrate this point: /ekames to/ (“(you) did it”) parsed as ['eka'mes to], /ipe mu to/ (“(s/he) told me”) parsed as ['ipem 'mu to]. The former constitutes a single clitic and the latter a double clitic construction. The secondary/rhythmic stress is also triggered in noun–possessive pronoun combinations, as in /dhaskalos mu/ (“teacher my”) realised as ['dhaska'lozmu]. Notably, as indicated by Revithiadou, it is a matter of dialectal variation which stress peak is more prominent (2006:84, note 6).

With regard to the prosodic organization of proclitics and enclitics in CG, a detailed description within Revithiadou’s (2006, 2008) approach is presented in chapter 3. The basic assumption is that CG clitics are prosodically organised in the following three ways:

1. As internal enclitics: post–verbal clitics incorporate into the PrW of the verbal host;
2. As affixal proclitics: pre–verbal clitics recursively adjoin with the unstressed function word into the PrW of the verb;
3. As prosodic words: pre–verbal clitics incorporate into the PrW of the preceding stressed function word.

It has been suggested, on the basis of acquisition data, that enclitics are more salient than proclitics (Mastropavlou et al. 2014). Both cross–linguistic and

cross–dialectal evidence are justifying this suggestion. In particular it has been shown that post–verbal clitics emerge earlier than pre–verbal ones in early Romanian (Avram & Coene 2007) and in early SMG (Stephany 1997, Tzakosta 2003, 2004a, 2000b). It has also been shown that the production of clitic pronouns in impaired populations in a language/variety that manifests predominantly the enclisis pattern is higher than clitic production in impaired populations in a language/variety that manifests predominantly proclisis (Mastropavlou et al. 2014), which arguably again points to the salience of enclitics over proclitics. On the basis of these studies, the "salience" of the enclisis pattern over the proclisis pattern denotes the earliest emergence and the higher degree of accessibility of the former (as manifested in language–impaired populations) with no further theoretical implications at the discourse level. I will return to the issue of saliency in Chapter 7, in which I will elaborate in the light of new evidence from the L1A of clitics in CG.

2.2.6. Phrase structure status

An issue that has received a lot of attention in the generative literature on pronominal clitics is their syntactic status, namely whether they constitute maximal projections (XP) or heads (X^0). This is related to the two kinds of approaches discussed in the literature on Romance cliticisation: the DP Hypothesis and the Affix Hypothesis. According to the former, clitics are generated as heads of DPs and they then move to a functional projection (Uriagereka 1995). Within the latter approach, clitics are considered as affix–like elements merged under a functional head (Duarte & Matos 2000). Focusing on CG, all the syntactic accounts so far proposed (Agouraki 2001, Terzi 1999a, 1999b) assume that clitics in CG are heads. As for SMG, Mavrogiorgos (2009) has convincingly argued that SMG clitics have a number of head properties.

I will apply the four diagnostics used by Mavrogiorgos (2009:57–60) for the "headness" of SMG clitics to clitics in CG. These diagnostics are based on arguments put forward by Cardinaletti and Starke (1999) to test the head properties of clitics cross–linguistically. The first is their ability to participate in

CD and CLLD (15) constructions. The second is that they should move together with their verbal host (34) and the third that they do not move across other heads; these properties trivially follow from their requirement for verb adjacency. Fourth, they should get deleted along with the auxiliary verb (35). Crucially, it is not possible for clitics to get deleted individually, no matter whether their verbal host is an auxiliary or a main verb (36). This is only possible when the verb of the second conjunct can be used intransitively as well, and if the clitic is deleted, a different interpretation arises (37).

(34) To vivlio (akoma) dhen to (*akoma) eferen (akoma).
The book–ACC yet NEG it–CL.ACC brought–3S
"The book, s/he hasn't brought it (yet)"

(35) Ichen ta kanonismena
Had–3S them–CL.ACC arranged–PP.ACC
dze simfonimena pu dzeron.
and agreed–PP.ACC from long time–ACC
"S/he had them arranged and agreed a long time ago"

(36) Eghorasa to dze efera *(to)[12].
Bought–1S it–CL.ACC and brought–1S
"I bought it and brought it"

(37) Ethkjavasa tin dze ipoghrapsa[13].
Read–1S her–CL.ACC and signed–1S
"I read it and signed"

I will return to the phrase structure of CG clitics and their head properties in Chapter 3, in which I discuss the formal accounts for cliticisation in CG that have so far been proposed.

[12] In order for a grammatical (or the intended) interpretation to arise, clitics cannot be deleted individually and they should surface in the 2nd conjunct as well. In languages such as European Portuguese, in which clitics may be deleted in conjunction, clitics have been argued to have phrasal status (XP) (Mavrogiorgos 2009:69). In CG, however, only the verb–clitic cluster can be deleted. This confirms that CG clitics are not phrasal elements.

[13] The referent of the clitic *tin* could be *i dhiatrivi* (the thesis), while the verb in the second conjunct is interpreted as having a distinct referent, i.e. some other document.

2.3. Clitic placement in CG

This section aims to describe clitic placement in CG. Enclisis and proclisis contexts are presented, as well as contexts allowing free clitic ordering. This overview summarises the descriptive sections of a number of papers (Agouraki 2001, Chatzikyriakidis 2012, Revithiadou 2006; 2008, Terzi 1999a; 1999b), and also highlights particularly interesting data.

CG is a language that adheres to the Tobler–Mussafia law, whose basic tenet is that clitics are banned from clause initial position[14]. Tobler (1875/1912) and Mussafia (1886, 1898) first recognised this pattern of clitic placement in medieval stages of Romance languages (Revithiadou 2006:80, footnote 2). Following Mavrogiorgos (2012), I assume that clitic languages fall within three categories with regard to the factors "regulating" the proclisis–enclisis alternation:

(a) Finiteness–sensitive languages, in which the enclisis–proclisis alternation depends on the finiteness of the verbal host[15].

(b) Tobler–Mussafia languages, in which clitics are banned from clause initial position and clitics appear pre– and post–verbally depending on the syntactic context.

(c) Languages exhibiting second position restrictions, or the so–called Wackernagel pattern, in which clitics typically occupy the 2nd (or Wackernagel) position in the clause.

CG is a Tobler–Mussafia language, hence clitics cannot appear in the first position of the clause, but may appear in various other positions, as illustrated in (38). CG clitics must be verb–adjacent, and therefore they obligatorily precede or

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[14] Note that in some Tobler–Mussafia languages (mainly old Romance), clitics may occupy clause initial position; see examples (19a) and (19b) in Mavrogiorgos (2012), taken from Fontana (1996) cited below as (1) and (2).

1. S'est il donques corrouciez a nos? [Old French]
   "Himself is he then vexed with us"
2. Oy dia en Grecia lo traen por… [Old Spanish]
   Today in Greece it.cl bring.3pl for…
   "Today in Greece they bring it as…"

[15] Mavrogiorgos (2009) suggested that proclisis in SMG correlates with non–restricted/full person agreement on T, while enclisis correlates with restricted person agreement on T.

follow the finite verb[16], regardless of their linear order with respect to the rest of the constituents. Their placement is contingent on the syntactic context. The remainder of this section presents the relevant contexts for the manifestation of the enclisis and the proclisis pattern.

(38) (I (pio poli) fitites (mu)) (shedhon)
The most students–NOM my–POSS almost
eteljosan tin (tin erghasia).
finished–3PL her–CL.ACC the essay–ACC
"Most of my students almost finished it (the essay)"

2.3.1. Enclisis and proclisis contexts

Declarative clauses in CG involve a post–verbal clitic, unlike Romance languages and SMG. This divergence between CG and SMG with respect to clitic placement is reminiscent of the divergence between Bulgarian and Macedonian: compare examples (39–40) (Franks & Bošković 2001:175) with (41–42).

(39) (Bg: */ Mac: OK) Mi go dade Petko vcera.
Me–CL.DAT it–CL.ACC gave Petko yesterday
(40) (Bg: OK / Mac: *) Dade mi go Petko vcera.
(41) (CG: * / SMG OK) Mu to edhose o Petros (e)htes.
Me–CL.GEN it–CL.ACC gave the Peter yesterday
(42) (CG: OK / SMG: *) Edhoke mu to o Petros ehtes.

CG clauses do not typically involve an overt subject, since CG is a pro–drop language. Yet, even if an overt subject is realised, the clitic follows the finite verb (43), provided that the subject is not emphatically or contrastively focused (44). The pattern of clitic placement in yes–no questions resembles clitic placement in declaratives, with the clitic appearing post–verbally (43), unless an

[16] CG has no infinitives, while gerundive constructions, which are assumed to involve a defective person feature in SMG (Mavrogiorgos 2009), are occasionally used in CG (see next section), but not productively.

emphatically or contrastively focused subject is involved, in which case the clitic precedes the finite verb (44). The enclisis pattern is also manifested in imperative clauses (45); the imperative clause is one of the two types of structures (the other being gerundive constructions) in which both CG and SMG manifest enclisis.

(43) Esi eferes to (?).
You–NOM brought–2S it–CL.ACC
"You brought it / Did you bring it?"

(44) ESI to eferes (?).
"It was / Was it you who brought it?"

(45) Fer(e) to.
bring–2S
"Bring it!"

Gerundive constructions are occasionally used in affirmative clauses in CG (46) and SMG alike. However, gerunds are not productively used in CG (Terzi 1999a:115, footnote 27): they do not have across the board application with different verbs and they sound unnatural when negated, unlike SMG gerunds. It is, thus, not surprising that none of the accounts of CG cliticisation takes into consideration clauses involving gerunds.

(46) (*Mi) Fkalondas ton pu ti mesi,
NEG taking him–CL.ACC from the middle–ACC
enna (e)shis to pedhion elefthero.
M have–2S the field–ACC free–ACC
"(Without) Taking him out of the way, you'll have the field free"

At this point, it is worth discussing the behaviour of CG enclitics in indicative clauses when combined with certain suffixes in order to illustrate their status in relation to their verbal host. Specifically, I will offer some examples to show the incompatibility of CG clitics with certain suffixes. The first suffix with which CG enclitics can never co–occur is the 1st person plural suffix *–te*. The

suffix *–te* can be used with complement–less verbs, like *eferamente* (bring–1PL.+PAST+PERF.nte), as well as with overt objects (47), or proclitics (49). Crucially, though, *–te* is incompatible with enclitics (48). According to Agouraki this suffix seems to behave as an "optional marker of V–in–C checking Emphasis on C" (2010:538, footnote 5)[17]. The second suffix with which enclitics are incompatible is *–usi/–asi*, which is a different ending for the 3rd person plural and is used interchangeably with *–un* in [–PAST] tense, e.g. *fernun / fernusi* ("bring"), and *–an* in [+PAST] tense, e.g. *efer(n)an / efer(n)asi*. The suffix *–usi/–asi* behaves similarly with *–te,* in that it can co–occur with overt objects (47) or proclitics (49) but not with enclitics (48). This behaviour of CG enclitics is indicative of their morpho–phonological status and the way they prosodify to their verbal host; I return to this in the next chapter.

(47) Eferamente / Eferasin to krevati.
brought–1PL.nte / brought–3PL the bed–ACC
"We/They brought the bed"

(48) *Eferamente / *Eferasin to (CL.ACC).
"We/They brought it"

(49) Na to ferumente / ferusi.
"We/They should bring it"

Turning now to CG proclitics, there are a number of environments in which CG clitics can only surface pre–verbally, immediately preceding the finite verb, patterning with the order manifested by SMG. CG clitics are preverbal when preceded by:

1. Modal particles
2. Wh–elements
3. Negative particles
4. The factive complementizer *pu* and complementizers *an/otan/ama/afu*
5. Stressed constituents in the left periphery of the CG CP

[17] Agouraki (2010) postulates that in CG the specification of sentential force on C has to be checked in overt syntax.

These are discussed in the following subsections.

2.3.1.1. Modal particles

CG makes use of a number of modal particles, namely *na, as, tha* and *enna*[18], which surface at the CM head, a C head specified for modality (Roussou 2000); *na* and *as* may move to COp as well. When clitic constructions are headed by *na, as, tha* or *enna*, the clitic obligatorily appears pre–verbally, as in (50).

(50) Na / As / Enna / Etha (<(dh)e+tha) to fero.
M NEG M it–CL.ACC bring–1S
"I should / Let me / I will / won't bring it"

2.3.1.2. Wh–elements

Matrix or embedded interrogative clauses[19] headed by wh–elements require a pre–verbal clitic in CG. This includes wh–argument questions (51) and quasi–argument questions (52). Wh–elements in CG may optionally conjoin with the dialectal element *embu*, with no alternation with respect to clitic placement, while bare and argumental *inda* ("what") obligatorily conjoins with *mbu* (53). Wh–exclamatives also require pre–verbal clitic placement (54).

(51) (Erotisen) Pkjos (embu) to efere?
Asked–3S Who–NOM it–CL.ACC brought–3S
"(S/he asked) Who brought it?"

(52) (Erotisen) Pothen / Pu / Pote / Indalos (embu) / Pos / Jati to efere?
From where when how how why
"(S/he asked) From where/When/How/Why did s/he bring it?"

(53) (Erotisen) Inda *(mbu) su eferen?

[18] See chapter 1 (1.2) for a thorough discussion on the properties and distribution of *as, na, tha* and *enna*.
[19] See chapter 1 (1.4) for a discussion on wh–question formation in CG.

What you–CL.GEN

"(S/he asked) What did s/he bring to you?"

(54) Pos / Indalos ta ekataferen omos o atimos!
How them–CL.ACC managed–3S yet the crook–NOM
"How he managed, yet, the crook!"

2.3.1.3. Negative particles

In CG, two negation markers are used: the negator *(dh)e(n)*, used with verbs in the indicative mood and immediately preceding the future particle *tha*[20], and the negator *men*, used with clauses headed by modal particles. Both *(dh)e(n)* and *men* trigger proclisis (55–56).

(55) (Dh)en (tha) to eferen.
NEG M it–CL.ACC brought–3S
"S/he didn't bring / wouldn't have brought it"

(56) Enna / Na men to feri.
M NEG it–CL.ACC bring–3S
"S/he will / should not bring it"

The negative particles *(dh)e(n)* and *men* may combine with the coordinating[21] conjunction *dze* (dialectal equivalent of the SMG conjunction *ke*) to form the clusters *endze* and *mendze* respectively. When *endze* and *mendze* head clitic constructions, enclisis is triggered, as illustrated in (57–58).

(57) Edze (<en + dze) eferen to / enna to feri.
NEG and
"S/he didn't / won't bring it"

[20] It usually combines with it to form the fossalized form *etha*, unless it is preceded by the complementizer *an* (see previous chapter).

[21] *Dze* can also function as a subordinating conjunction (Agouraki 2001). This is illustrated in example (13) in Agouraki (2001:8) repeated below as (1):

1. Akui tin dze lali.
Hear–3S her–CL.ACC and say–3S
"He heard her say"

(58) Medze (<men + dze) feri to.
NEG and
"S/he should not bring it"

This pattern can be explained on the basis of the inherent properties of *dze* in CG, which can often conjoin with different particles. Apart from the negative particles, a number of other particles including temporal ones like *ama*, *andan* and *oson* ("when") and the question markers *ampa* and *(m)emba* can appear conjoined with *dze*. As with the negative particles, while *ama*, *andan*, *oson*, *ampa* and *(m)emba* generally trigger proclisis, when conjoined with *dze*, they trigger enclisis. I assume, following Agouraki (2001:8–9), that *dze* typically functions as a coordinating conjunction that conjoins two CPs. When combined with a particle, the particle appears in the first conjunct, which constitutes an elliptical CP (with a missing predicate, possibly *en* ("is")). *Dze* appears under the conjunction head and the verb surfaces in the second conjunct. Hence, if a clitic is realised in the second conjunct, it will not appear clause initially but will follow the finite verb.

2.3.1.4. The factive complementizer *pu* and complementizers *an/otan/ama/afu*

Pu is characterised as a factive complementizer as it follows factive predicates, contrasting with complementizers *oti* and *pos* which follow non–factive ones (Ralli 2006: 128–129)[22]. Following Roussou (2000), I assume that *pu* and *an* appear in the higher C head of the clause. I take her claim to hold for complementizers *otan, ama* and *afu* as well. As shown in examples (59–60), when either *an/otan/ama/afu* or *pu* head the clause, the clitic is realised pre–verbally.

(59) An / Otan / Ama / Afu ton dhi.
If / When After him–CL.ACC see–3S
"If / When / After s/he sees him"

[22] *Pu*–clauses in Greek are argumental, yet they resist nominalisation (Roussou 1991, 1994). This may be due to the fact that *pu* is lexically specified as nominal. This can be indicated by the following facts: first, *pu* can occur in subject position and second, verbs that do not assign case cannot take *pu*–clauses as their complements (Tsakali 2006:179–180, footnote 2).

(60) Eharika pu se idha.
Was–1S happy COMP you–CL.ACC saw–1S
"I was happy that I saw you"

2.3.1.5. Stressed Constituents in the left periphery of the CG CP

Full NPs, strong pronouns and adverbs that receive emphatic/contrastive focus or narrow/new information focus appear in the [Spec,CP] position of the CG clause (Agouraki 2010). When these constituents head a clause involving a clitic, proclisis is triggered. Notably, under the heading "stressed constituents", a number of different phrasal constituents are subsumed. Thus, irrespective of the categorial status of the constituent in question, if it is stressed, proclisis is triggered. This constitutes evidence for the important role of prosody in clitic placement in CG. This is relevant for the discussion of syntactic and prosodic accounts of cliticisation in CG outlined in the next chapter.

(61) A: Tuto EPSES to eferen i Maria. [Narrow Focus]
This last night it–CL.ACC brought–3S the Mary–NOM
X: EGHO to efera, oi i Maria! [Contrastive Focus]
I brought–1S NEG
"A: This (one) it was only last night that Mary brought it.
X: I brought it, not Mary!"

2.3.2. Free ordering of pronominal clitics in CG

In some contexts, CG clitic pronouns can optionally appear either pre– or post–verbally. These contexts include clauses headed by the complementizers *oti* and *pos* (Terzi 1999b:237, note 7), as illustrated in (62–63), the clausal conjunctions *jati* and *epidhi* ("because") and the complementizer *afu* with the meaning of "because" (65–66) (Chatzikyriakidis 2010, 2012). However, if an unstressed overt subject is realised in the embedded clause, immediately following the COMP (67), the preferred position for the clitic is the post–verbal one (Terzi 1999a:109–

110), unless the overt subject is stressed (see section 2.3.1.5 for a discussion of stressed constituents in the left periphery of the CG CP).

(62) Lali oti / pos ton aghapa.
Say–3S that him–CL.ACC love–3S
(63) Lali oti / pos aghapa ton.
(64) Lali oti / pos dzini aghapa ton.
She–NOM
"S/he says that she loves him"
(65) Jati / afu ton aghapa.
Because
(66) Jati / afu aghapa ton.
(67) Jati / afu dzini aghapa ton.
She–NOM
"Because she loves him"

Mavrogiorgos argues that the free ordering of object clitics in CG *oti–* and *pos–*constructions (62–63) can be attributed to the realisation of high and low complementizers; he also assumes that *oti* (and subsequently *pos*) occupies the F–position only in constructions like (62)[23] (2012:35–36). An alternative account is possible, however, if we adopt a prosodic or interface account of cliticisation in CG. Following ideas in Bošković (2000), we could argue that the optionality in clitic placement in the contexts under discussion is due to the fact that "It is generally possible to assign more than one prosodic structure to a single syntactic structure, depending on how it is pronounced" (Bošković 2000:108, footnote 35). For Bošković the domain of cliticisation is the Intonational Phrase (I–phrase). Therefore, a pause immediately after the complementizer in (63) would indicate the boundary of a different I–phrase and post–verbal clitic placement would follow.

[23] See chapter 3 for a detailed discussion of Mavrogiorgos's proposal for cliticisation in Tobler–Mussafia languages.

2.3.3. Clitic clusters in CG

Single clitics and clitic clusters in CG adhere to the same positioning restrictions. Clitic clusters are placed pre– or post–verbally depending on the syntactic context, as described in 2.3.1, and they have free ordering in the environments discussed in 2.3.2. The order in which clitics appear in CG clusters is strictly CL_{DAT}–CL_{ACC} (contra Terzi 1999a), unlike in SMG, where the dative and the accusative clitic exhibit flexible ordering in imperative and gerundive constructions (both CL_{DAT}–CL_{ACC} and CL_{ACC}–CL_{DAT} are possible). Certain person restrictions on the possible combinations between indirect (IO) and direct object (DO) clitics that are operative in SMG (Holton et al. 1997: 192–194, (Philippaki–)Warburton 1977) are applicable in CG as well. In particular, only a 3rd person clitic pronoun can appear as a DO within the cluster, whereas there is no person restriction for the IO (1st, 2nd and 3rd person clitics can all appear as IOs)[24] (Revithiadou & Spyropoulos 2008). These facts are captured within the well–known Person–Case Constraint (Bonet 1994: 48), cited in (68)[25].

(68) If DAT–PERS, then ACC–3rd.

2.3.4. CG clitics and second position restrictions

Given that CG is a pro–drop language, the finite verb usually surfaces clause initially and clitics often appear in the second position (2P) of the clause. However, CG clitics are not subject to 2P restrictions and CG is not a Wackernagel language, unlike Serbo–Croatian and Ancient Greek[26]. This is an

[24] Ralli described the positional restrictions imposed on SMG clitic clusters as follows:
1. 1st and 2nd person pronouns do not co–occur,
2. 1st and 2nd person pronouns precede 3rd person ones,
3. A genitive pronoun precedes an accusative one (2006:146).

[25] For the acquisition of the Person–Case constraint in Greek, see Tsakali and Wexler (2003).

[26] According to Horrocks (1997:59) clitic pronouns in Ancient Greek typically collocated with sentence connectives in 2P. In the Hellenistic period the verb would appear clause initially and the clitics would follow in 2P, unless clause initial position was occupied by an emphatically/contrastively focalised element or by some clausal operator expressing negation, interrogation or modality, in which case the order F(ocus)/O(perator)–CL–V would surface. This

issue originally brought to attention by Terzi (1999b), who offers ample evidence against an analysis of CG as a language with 2P restrictions. A comparison between an embedded clause in Serbo–Croatian and its CG equivalent trivially illustrates the divergence between the two languages with respect to clitic placement. In the Serbo–Croatian example in (69), taken from Terzi (1999b), the clitic (*nam*) in the embedded clause immediately follows the complementizer (*da*) in 2P. In the equivalent CG structure (70), however, the subject of the embedded clause is realised immediately after the complementizer (*oti*), the negator immediately follows it, while the clitic (*mas*) appears in the third position of the clause.

(69) Ivan kaze da nam Olga nista ne daje.
Ivan says that us–CL Olga nothing NEG gives
(Terzi 1999a:229, example 10)

(70) O Ivan lali oti i Olga en mas dia tipote.
The Ivan says that the Olga NEG us–CL gives nothing
"Ivan says that Olga is not giving us anything"

In order to accommodate the Serbo–Croatian facts, Rivero and Terzi (1995 in Terzi 1999b:229) assume that the element that surfaces clause–initially moves to the Spec CP or to C, depending on its X–bar status, and C takes the Wackernagel Phrase (WP) as its complement. The clitic is realised in [Spec,WP] ((8) in Terzi 1999b:229, repeated below as (71)).

(71) $[_{CP}\ [_{C'}\ [_{WP}$ CL $[_{W'}\ [(_{NegP})\ [_{IP}\ [_{I'}\ [_{VP}\ [_{V'}$….]]]]]]]]]

Bošković (2000/2001) offers a different account whose basic tenet is that clitic placement in Serbo–Croatian is regulated by some PF filters. In particular, he suggests that the following PF filters are applicable: a. #_ and b. suffix ((73) in Bošković 2000:107). The former indicates that Serbo–Croatian clitics appear in the initial Intonational Phrase (I–phrase) of their clause, and the latter that they are

dual distribution of clitics continued into medieval Greek and is preserved in contemporary CG as well.

specified as suffixes in the lexicon. The relevance of Bošković's analysis for cliticisation in CG is illustrated and discussed in the last chapter.

2.3.5. CG, European Portuguese and Galician

CG, European Portuguese (henceforth EP) and Galician adhere to the Tobler–Mussafia law, whereby clitic pronouns are banned from clause initial position. Clitics appear post–verbally, unless a proclisis trigger heads the clitic clause. The proclisis–triggering contexts in CG, EP (Duarte & Matos 2000, Lobo & Costa 2012) and Galician (Uriagereka 1995) extensively overlap.

EP exhibits three patterns of clitic placement: proclisis (pre–verbal clitic), enclisis (post–verbal clitic) (72) and mesoclisis (clitic within the verb). Proclisis is contingent on specific triggers, mesoclisis is manifested in future and conditional tenses in enclitic contexts (73), and enclisis occurs in all other contexts. Proclisis triggers in EP include negation markers (74), negative (75) and quantified subjects (76), some preverbal adverbs (*já*, *também*, *sempre*, *só*, *ainda*) (77), finite subordinate clauses (78), a filled CP (wh–questions (79), wh–exclamatives, *é que* –clefts) and focused initial constituents (80). The following examples taken from Lobo and Costa (2012) illustrate these points.

(72) O João lavou–se.
The João washed_CL.3S.Refl
"João washed himself"

(73) O João lavar–se–á.
The João wash_CL.3S.Refl_will
"João will wash himself"

(74) O João não se lavou.
The João NEG CL.3S.Refl washed
"João didn't wash himself"

(75) Ninguém se lavou.
Nobody CL.3S.Refl washed
"Nobody washed himself"

(76) Todos os meninos se lavaram.
All the boys CL.3PL.Refl washed
"All the boys washed themselves"

(77) O João já se lavou
The João already CL.3S.Refl washed
"João already washed himself"

(78) O João disse que se lavava todos os dias.
The João said that CL.3S.Refl washed all the days
"João said that he washed himself every day"

(79) Quem se lavou?
Who CL.3S.Refl washed
"Who washed himself?"

(80) MUITA ÁGUA se perdeu!
Much water CL.3S.Refl lost
"So much water was lost!"

The overlapping contexts for pre–verbal clitics in EP and CG include clauses headed by negative markers / subjects, wh–elements or focused initial constituents. Moreover, a filled CP and some preverbal adverbs trigger proclisis in EP, while in CG this applies to a confined set of complementizers/adverbs. Finally, quantified subjects trigger proclisis in EP (76) but not in CG (Terzi 1999b:237, note 6) (81). With regard to negative quantifiers, CG and EP pattern alike, as in CG these are obligatorily followed by the negation marker (82) which triggers proclisis anyway.

(81) O kathenas vlepi to.
The everybody–NOM see–3S it–CL.ACC
"Everybody sees it"

(82) Kanenas *(en) to idhen.
Nobody–NOM NEG it–CL.ACC saw–3S
"Nobody saw it"

As for Galician, pre–verbal clitics are triggered in wh–questions (84), negatives (85), clauses headed by quantifiers (86) or emphasised XPs, as well as in subordinate constructions (87); the examples are taken from Uriagereka (1995). All these contexts, except clauses headed by quantifiers, require pre–verbal clitic placement in CG as well.

(83) Ouvimo–lo.
Hear–1PL.it–CL
"We hear it"

(84) Quén o ten ouvido?
Who it–CL has heard
"Who has heard it?"

(85) Non o ten ouvido.
NEG it–CL has heard
"S/he hasn't heard it"

(86) Todo o mundo o veu
Everyone it–CL saw
"Everyone saw it"

(87) Quero que o oiades.
Want–1S that it–CL hear–2S
"I want you to hear it"

Table 2.4 summarises the contexts for pre–verbal clitic placement in CG, EP and Galician and highlights the points of convergence and divergence between the three languages.

Syntactic environments	CG	EP	Galician
Negation markers	YES		
Wh–questions	YES		
Focused/Stressed/Emphasised XPs	YES		
Complementizers	[YES]	YES	YES
Quantifiers	NO	YES	YES
(Some) Pre–verbal adverbs	NO	YES	YES

Table 2.4: Proclisis contexts in CG, EP and Galician.

2.4. Summary

This chapter discussed the basic properties and the syntax of clitic pronouns in CG. It outlined their morphological, semantic and phonological properties, their distribution, their behaviour with respect to coordination and modification and their categorial status. Clitic placement in CG was also discussed. An overview of the proclisis and enclisis contexts, as well as of contexts allowing free ordering of clitic pronouns, was followed by comparisons with 2P languages and languages exhibiting similar positioning restrictions to those of CG. A number of proposals put forward to account for clitic placement in CG will be discussed in the next chapter.

CHAPTER 3: ACCOUNTS OF CLITIC PLACEMENT IN CYPRIOT GREEK

3.1. Introduction

This chapter presents syntactic proposals, a Prosodic Inversion account and interface approaches [1] for clitic placement in CG and addresses a central theoretical dilemma: is the placement of clitic pronouns in CG the result purely of syntactic operations or is it constrained by certain phonological well−formedness constraints? The discussion is organised as follows: the first section presents syntactic accounts put forward by Agouraki (2001) and Terzi (1999a, 1999b), which suggest that enclisis in CG derives from proclisis with the manifestation of syntactic movement of the finite verb to a higher projection. The second section discusses a Prosodic Inversion (PI) account by Condoravdi and Kiparsky (2001) that assumes an enclitic template for CG clitics that triggers movement at PF. The third section presents two interface accounts, within which both syntax and PF are involved in cliticisation in CG. The first is an analysis of cliticisation in Tobler−Mussafia languages suggested by Mavrogiorgos (2012) and the second is a proposal by Revithiadou (2008) assuming a PF−controlled spell−out of copies of clitic pronouns. A number of interim conclusions are outlined in the last section.

An important point should be made regarding the use of the terms *proclisis* and *enclisis*. These terms are typically used to indicate the directionality of the phonological/prosodic dependence of clitic pronouns upon their host. Specifically, they indicate whether clitics procliticise or encliticise to their host, independently of their relative order with respect to the verb (pre−/post−verbal). In this chapter, I will use the terms *proclisis* and *enclisis* descriptively to refer to clitics' pre−, and post−verbal placement, correspondingly, unless otherwise indicated.

[1] This chapter discusses accounts that try to accommodate the phenomenon in synchronic terms. For a discussion of the diachronic development of clitic pronouns in Greek, which is also relevant for the distribution of CG clitic pronouns, see Pappas (2001, 2004).

3.2. Syntactic accounts

To date, three syntactic analyses of CG clitic placement have been offered, namely those of Agouraki (2001), and Terzi (1999a) and (1999b). All assume that enclisis derives from proclisis upon the manifestation of verb movement past the clitic. However, they attribute verb movement to different operations and propose different landing sites for the finite verb.

3.2.1. The V−to−M analyses for finite enclisis

Terzi (1999a, 1999b) adopts Kayne's (1994) antisymmetry proposals. She assumes that clitics are heads (X°s)[2,3] in both SMG and CG and that they adjoin to the same functional head.

In her first proposal (1999a), she departs from the idea of a designated adjunction site for clitic pronouns, namely a functional head where clitics adjoin in all syntactic environments. Instead, she advocates "a bipartition with respect to the type of functional heads which serve as adjunction sites for clitics" (Terzi 1999a:87), in both CG and SMG. She proposes that clitics adjoin to T in tense−defective contexts (when tense features are weak) and to F, an empty placeholder devoid of verb−related features, in all remaining contexts. The configuration for clitic constructions in non tense−defective contexts in CG (and SMG alike) is the following (Terzi 1999a:93):

(1) $[_C \ldots [_F$ to $[_F 0 [_T$ diavasa$_i$ $[_{Agr}$ e$_i$ $[_V$ e$_i$]]]]]]
it read−1S

[2] Terzi adopts a line of reasoning that builds on the similarity between 3rd person clitics and determiners in Greek in order to argue for the head−ness of clitics (1999a:86, footnote 2). She takes into account clitic doubling facts such as *Ton idha ton Yianni* "him−CL saw−1S the John−ACC", and assumes that the doubled phrase is the specifier of a determiner head, following Uriagereka (1995). Thus, she considers Greek clitics to be X°s. Notably, this similarity between 3rd person clitics and determiners exists in both CG and SMG. So, provided this is the right criterion for deciding upon the status of clitics, any conclusion that can be drawn should apply to both varieties of Greek.

[3] See also section 2.2.6 of chapter 2.

Terzi's F head is "a functional head partially reminiscent of the head of Clitic Voice of Sportiche (1996) (but significantly different from Uriagereka's (1995) F)" (Terzi 1999a:93[4]). Crucially, Terzi's (1999a) F does not check features of the verb overtly, thus the verb does not move through F.

In CG (as opposed to SMG), the finite verb undergoes movement past F to the M(ood) head, which gives rise to the order V−clitic (Terzi 1999a). M is the head of the Mood Phrase and encodes modality. V−to−M is manifested in all clitic constructions except clauses headed by functional heads with operator−like properties, such as M, Neg and the Focus head. According to Terzi (1999a), V−to−M movement in CG is related to the Infl make−up of CG, and specifically to the feature composition of M.

With regard to imperatives, Terzi (1999a) assumes, following Beukema and Coopmans (1989), that the imperative Tense involves a [−Tense] Infl. (1999a:94). A T with weak verbal features, either specified as [−T] (as argued for the imperative verb), or involving a defective Tense (as is the case for infinitives), becomes a legitimate adjunction site for clitics within her analysis. The argumentation is developed as follows: since the imperative verb does not raise to T in the overt syntax for feature checking requirements, even if the clitic adjoins to T, a configuration of multiple adjunction is not created[5]. Terzi's proposal is economical with respect to the adjunction site for clitics, in the sense that, in contexts where some functional head that constitutes an eligible host (T) for clitics is present, the F projection is precluded (1999a:94, footnote 12).

The imperative verb will ultimately undergo movement to C. This movement is triggered by illocutionary features in C (1999a:89). As a by−product of the verb movement to C, the imperative verb will initially raise to T. Once it has its Tense features checked[6] (Terzi 1999a:95−96), it ultimately raises to C. The

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[4] Cf Terzi (1999a:93, footnote 10) for a comparison between Sportiche's Clitic Voice and Uriagereka's F.

[5] In finite contexts, T is not a legitimate adjunction site for clitics, since in languages like Greek the finite verb raises as high as T and adjunction of clitics to T would create a configuration of multiple adjunction, which is ruled out by Kayne's Linear Correspondence Axiom (Terzi 1999a:92).

[6] For this to happen, Terzi assumes that the Linear Correspondence Axiom does not apply after spell−out. In other words, she considers the LCA not applicable in LF, and hence multiple

movement of the imperative verb to C obligatorily proceeds via T because skipping the latter would violate the Shortest Move Requirement (Ferguson and Groat 1995). According to the Shortest Move Requirement, "a category moving to check feature(s) of a given type may not skip moving into an immediate relation with the closest c−commanding head which checks features of that type" (Terzi 1999a:96). Therefore, for V−to−C movement to be manifested, the verb must left−incorporate into the clitic, which has already adjoined to T, and check its tense features. Then the complex consisting of the imperative verb and the clitic moves to C (1999a:97−98).

Terzi's first proposal is based on the idea that the Inflectional system in CG and SMG differs (1999a), and two pieces of evidence are offered to justify this claim (1999a:110, note 24). The first is the absence of the future particle *tha* and the second is the unavailability of compound tenses in CG. I will return to this argument after discussing her second proposal.

In her second proposal, Terzi (1999b) leaves the imperative verb aside and discusses different finite contexts in CG. She suggests that CG clitics adjoin to the featureless functional head F which takes IP as its complement (2) (Terzi 1999b:231). Her claim regarding the post−verbal position of clitics in CG remains unaltered. As in her original proposal (1999a), she assumes that the finite verb undergoes movement with M as its landing site. She rejects the possibility of V−to−C movement on the basis of constructions where lexical complementizers (like *oti* for example) that occupy the C position in the CG clause can co−occur with post−verbal clitics[7]. As to what triggers verb movement, Terzi (1999b) attributes V−to−M to the licensing requirements of CG clitics, which have to be satisfied. She proposes that CG clitics have strong features that must be licensed in the internal domain of a functional head with operator−like properties before

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adjunction is not ruled out (1999a:95−96). This assumption is contra Kayne (1994), who assumes that the LCA applies at all levels of representation, but is in accordance with Chomsky (1995).

[7] Terzi does not ignore the possibility of an analysis involving recursive CPs in CG, within which both a lexical complementizer and the verb can co−occur (1999b:238, note 14). She rejects it, though, as there is no independent evidence verifying either the presence of recursive CPs or the manifestation of V−to−C movement in CG.

spell−out[8]. Such functional heads are the Neg head, the M(ood) head, wh−elements and the head of the Focus phrase. In her own wording, this type of licensing involves a head−complement rather than a Spec−head relation (Terzi 1999b:233). In the absence of such a functional head, the verb undergoes movement to M and clitics surface post−verbally. Verb movement in Terzi (1999b) is seen as an operation of last resort.

(2) $[_{CP}\ [_{C'}\ COMP\ [_{MP}\ [_{M'}\ [_{FP}\ [_{F}\ CL\ [_{F'}\ [_{IP}\ [_{VP}\ [_{V'}\ldots.]]]]]]]]]]$

Terzi further compares clitic−left dislocation (CLLD) and clauses headed by focused XPs; in the former the clitic surfaces post−verbally and in the latter pre−verbally. In CLLD the dislocated XP is assumed to be either CP−adjoined (Cinque 1990) or IP−adjoined (Anagnostopoulou 1994). Terzi wants to show that only functional heads (i.e. the Focus head), and not just any kind of head, can license clitics. She compares structures with an empty C (an enclisis context) and clauses in which the C head has wh−features (a proclisis context), in both matrix and embedded environments, to show that it is a prerequisite for the functional head to have operator−like properties in order to license clitics[9] (1999b:234−235).

Terzi's (1999a, 1999b) proposals raise a number of important issues. In the first place, with regard to the proposed movement of the verb past the clitic, it is not clear how the verb can skip the clitic on its way to M, without violating the Head Movement Constraint (HMC)[10]. Recall Terzi's (1999a, 1999b) claims that clitics in both CG and SMG are heads (X°s). Recall also the HMC: "Head movement of X to Y cannot skip an "intervening" head Z"[11]. In this case, verb movement to M cannot skip the intervening[12] clitic.

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[8] Despite the key role of the notion of *licensing* in her analysis, some aspects of it are not clearly defined, i.e. the *internal domain* of the respective element, the set of proposed *licensers*, and the properties that *operator−like elements* have.

[9] As for clauses headed by the factive complementizer *pu*, she argues that the Specifier of *pu*−CPs is occupied by an empty operator (Anagnostopoulou 1994).

[10] But note that Terzi adopts the Shortest Move requirement which weakens/relativises HMC.

[11] Cf. Roberts' claim that the Head Movement Constraint does not exist (2010:193).

[12] It is, of course, questionable what counts as a possible intervener (cf. Iatridou 1994) for Terzi (1999a, 1999b). Noteworthy, Terzi notes that with respect to this issue she follows proposals in Benincà and Cinque (1993).

Secondly, an important aspect of the movement analysis concerns the reason why it occurs. Terzi's (1999b) assumption that the finite verb moves to satisfy requirements of the clitic pronoun is problematic. Following Chomsky (1991, 1993), the movement of any given element is driven by morphological requirements of the element that moves; this is something Terzi acknowledges (1999b:233) as well. On the other hand, if verb movement is triggered by strong verbal features, it is not easy to see how these features are satisfied when movement is not manifested, i.e. when M or Neg head the clause (Terzi (1999b:233).

The third point concerns Terzi's claim about the properties of CG and SMG Inflection. She argues that CG Infl is different from SMG Infl in several aspects (1999a:110, note 24; 1999b:238, note 18) and that what differentiates the two varieties is the feature composition of M. She provides two pieces of evidence to justify her claim: first, that CG lacks the future particle *tha* of SMG, and second, that compound tenses are not available in CG (1999a:110, note 24; 1999b:237−238, note 5, 11 & 18). However, CG does not lack a future particle. The dialectal equivalent of *tha* is *enna*[13]; this is shown on the basis of their identical distribution (see section 1.2 in chapter 1). Moreover, negated future clauses in CG are headed by *etha*, an amalgam form which combines the negator *(dh)e(n)* and the future particle *tha*. With regard to the compound tenses, I agree with Terzi that not all the compound tenses that are available in SMG are available and productive in CG as well. Greek Cypriots use simple past forms for events that SMG−speakers express in the present perfect. However, although present perfect forms are not productive in CG[14], as already pointed out by Arvaniti (2010) and Terzi (1999a, 1999b), past perfect forms are. Past perfect in CG is formed with the past form of the auxiliary *eho* ("have") and the participle[15].

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[13] Terzi assumes that *enna* is a derived form that consists of the modal *na* and the copula. In her analysis future structures in CG utilise a sentential complement (headed by *na*) of an impersonal verb: *E* (is) *na* (M) *pao* (go) (1999b:238, note 11).

[14] Cf. Arvaniti (2010:28) for some examples in which the Present Perfect is used by Greek Cypriots, but with a concrete time reference, something that is ungrammatical for most speakers of SMG.

[15] Moreover, in CG and other Greek varieties, perfect tenses may be built with the finite forms of the auxiliary *eho* ("have") or *ime* ("be") and the past participle of the verb (Ralli 2006:133−135).
1. Eho / Iha ta thkjavasmena.

Furthermore, the arguments for the bipartition with respect to the adjunction site for CG clitics in Terzi (1999a) are not strong. She argues that in CG the relative order of the dative and the accusative clitic in double clitic constructions depends on the finiteness of the verb involved: in finite contexts the dative clitic always precedes the accusative, while the imperative verb (bearing [−tense] Infl) allows free ordering (CL_{DAT}−CL_{ACC} or CL_{ACC}−CL_{DAT} [16]). However, the argument is disconfirmed by the fact that in CG neither the finite verb nor the imperative verb allow free ordering of the dative and the accusative clitic in double clitic constructions. The relative order is fixed and is always CL_{DAT}−CL_{ACC}.

I agree with Terzi (1999a, 1999b) about a crucial aspect: the position of the finite verb in CG clitic constructions. Terzi claims that the finite verb does not move higher than M (1999a, 1999b). Following proposals in Alexiadou (1997) for SMG, verb placement has an overt correlate in the relative ordering of adverbs. Hence, Terzi's (1999a, 1999b) claims with regard to verb placement can be (dis−)confirmed on the basis of adverb placement in the relevant structures. The relevant position of the verb–clitic combination in CG in relation to the position of adverbs (3), and, in particular, of aspectual adverbs such as *schedon* (4), in root and *na*−clauses shows that the finite verb in CG clitic constructions does not move higher than M. Corroborative evidence is offered by the identical order of the verb–clitic combination in CG and SMG (3). Recall the standard assumption that in SMG clitic constructions the finite verb adjoins to a functional head lower than M (T in Mavrogiorgos 2009 and Terzi 1999a, I in Philippaki–Warburton 1998).

Have / Had−1S them−CL read−PP.3PL.ACC
"I have/had done my homework"

[16] Within Terzi's (1999a) analysis, double clitics may either adjoin each to a different functional head (CL_{ACC} to the lower and CL_{DAT} to the higher), or both to the same, with the CL_{DAT} adjoined to the accusative and their complex to F (in finite contexts) or T (in imperatives) (see (32) and (33) in Terzi 1999a:102). In CG finite contexts, the V−to−M movement is not manifested via F (where the clitics adjoin), because F is devoid of verbal features. So verb movement causes no alternation in the relative order of the dative and the accusative clitic. In contrast, the imperative verb moves to C through T. If the former is manifested, the imperative verb incorporates into the lower clitic, namely CL_{ACC}, they skip over CL_{DAT} and the following order surfaces: CL_{ACC}−CL_{DAT}. If the latter option is manifested, the imperative verb incorporates into the lower clitic, namely the dative, they move as a complex to C and the V−CL_{DAT}−CL_{ACC} order surfaces.

(3) Panda prosehis ton (CG) / na ton prosehis (CG & SMG).
Always take care−2S him−CL.ACC M
"You always take care of him"

(4) Shedhon edhere me / na me deri.
Almost beat−3S me−CL.ACC
"He almost beat me"

3.2.2. The filled−C requirement

Agouraki (2001) offers a different analysis, which is built on three tenets. First, CG clitics head clitic phrases located between CP and IP[17]. Second, clitic placement in CG does not involve syntactic cliticisation, but it only depends on verb placement; in fact, it is an epiphenomenon of verb placement. Third, CG has a filled C requirement for clause−typing purposes. Let us start from the last point. Agouraki analyses CG as a verb second (V2) language. However, she dissociates the two component parts of V2, namely V−to−C and filled [Spec,CP], arguing that they constitute two distinct requirements[18], and suggests that CG only has the former requirement. For Agouraki (2010:542) the filled−C requirement is basically a requirement for the specification of sentential force on C to be checked in the overt syntax[19].

Thus, in CG clitic constructions, if the C position is not filled, V−to−C is manifested to satisfy the filled−C requirement, whereupon the verb appears in C and the clitic surfaces post−verbally. If, on the other hand, the C position is filled, V−to−C raising is blocked, hence the verb adjoins to I and the clitic appears pre−verbally. For Agouraki (2001, 2010) the default pattern for clitic placement is enclisis, and proclisis obtains when some element fills the C position.

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[17] In Agouraki (2010) she elaborates on this idea and argues that clitics are AGR−O(bject) heads, in line with Sportiche (1996), and AGR−O in Greek is above T and lower than NEG and C (2010:531).

[18] In support of her proposal, Agouraki mentions the case of Old Irish, a language for which it has also been proposed that it only has a filled C but not a filled [Spec,CP] requirement (Carnie, Harley & Pyatt 2000).

[19] Agouraki (2001) assumes that the C position in CG has the morphological feature [Declarative], [Interrogative] or [Emphasis], which is checked either by the verb or by a complementizer with the relevant feature. In Agouraki (2010:542) [Emphasis] as a specification on C appears to be in complementary distribution with [Assertion], [Question] and [Situation].

Agouraki (2001) further assumes that the C position in CG can host either overt or null complementizers, both of which block V−to−C raising and yield proclisis. As shown in chapter 2, apart from the factive complementizer *pu* and the complementizer *an*, a number of other elements trigger proclisis in CG, including negative markers, wh−elements, focalised XPs and modality markers. In order to account for these facts, Agouraki makes a number of assumptions for the relevant heads. For Neg, she argues that it is either generated in or raised to C in complementizer−less clauses. As for modality markers, she assumes that they occupy the C position. For wh−questions and sentences with XP−foci, she suggests that the C position is occupied by the null complementizers *WH* and *F* respectively, and the [Spec,CP] position by wh−phrases and focalised XPs respectively. Hence, V−to−C is blocked and proclisis obtains. She further assumes that the [Spec, CP] position can be filled with pre−verbal existential quantifiers and pre−verbal stressed operators (with the exception of universal quantifiers, *also*−phrases and *even*−phrases (2010:531)). The structure in (5), based on the clause structure in (7) in Agouraki (2001:5), illustrates her assumptions with regard to the architecture of the CG CP.

(5) $[_{CP}$ WH/F/Top $[_{C'}$ C ([WH/F]) $[_{NegP}$ $[_{Neg'}$ Neg $[_{ClP}$ $[_{Cl'}$ Cl $[_{IP}$ $[_{I'}$ I VP]]]]]]]]]

Agouraki (2001) discusses the syntax of verbal modifiers in Hungarian aiming to show that verbal placement can determine the placement of some other constituent. Verbal modifiers in Hungarian typically appear pre−verbally, as in (6). In negative clauses (7), syntactic foci and wh−clauses, however, they appear post−verbally. These are syntactic contexts that trigger proclisis in CG. Even though the aforementioned heads trigger the reverse pattern of placement for CG clitics compared to Hungarian verbal modifiers with respect to the verb, namely proclisis in CG and enclisis[20] in Hungarian, Agouraki focuses on the fact that in both cases verbal placement determines the order between the verb and some other constituent.

[20] In Hungarian, V−to−C is manifested when some constituent (i.e. focused XP, wh−phrase) fills the [Spec,CP] position (Agouraki 2001:11).

(6) Péter be ment a hazba.
Peter into went the house
"Peter went into the house"

(7) Péter nem ment be a hazba.
Peter NEG went into the house
"Peter didn't go into the house" (Agouraki 2001)

Agouraki (2010) further develops her account of the filled−C requirement of CG. The essence of this proposal is that the C head in CG has a clause−typing feature that must be checked in narrow syntax. This feature can be checked by an appropriate complementizer, the Negation head or the verb. Otherwise, an appropriate operator in [Spec,CP] can also satisfy the requirement; recall that Agouraki (2001, 2010) takes filled C and filled [Spec,CP] to be in complementary distribution in CG. Notably, Agouraki (2010) argues that this proposal is in line with Rizzi's (1997) proposal concerning what marks clause−typing cross−linguistically[21].

Some points need to be raised with respect to Agouraki's (2001) proposal. First, there is a lack of independent evidence that CG has one of the two component parts of V2 languages, namely the filled−C requirement. Second, the assumption that V−to−C is manifested unless the C position is filled is challenged by CG clauses where complementizers like *oti* and *pos* co−occur with post−verbal clitics (see section 2.3.2 in chapter 2). Third, one of the basic tenets of Agouraki's (2001) analysis, namely the assumption of V−to−C movement in CG finite clauses, is challenged on the basis of the similarity between CG and SMG with respect to adverb placement (see previous section).

3.3. Prosodic inversion account

Condoravdi and Kiparsky (2001) offer a prosodic account for clitic placement in Greek dialects aiming to capture the syntactic variation and change with respect to

[21] In Rizzi's wording "Force is expressed sometimes by overt morphological encoding on the head (special C morphology for declaratives, questions, relatives, etc.), sometimes by simply providing the structure to host an operator of the required kind, sometimes by both means" (Rizzi 1997:283).

cliticisation. They take a diachronic perspective and adopt a comparative−historical approach. They suggest that finite enclisis in varieties like CG[22] is due to prosodic inversion that alters the relative order between the clitic and the verbal host.

Condoravdi and Kiparsky (2001) argue that clitics in modern Greek dialects are of three distinct types. Type A clitics are X^{max} elements and syntactically adjoin to a maximal projection. Clitics of this type appear in pre− and post−verbal position, but they always encliticise to their host. Type B clitics are X^0s, hence they syntactically adjoin to a lexical head, and they are either proclitics (Kozani) or enclitics (Pontic). Type C clitics (as in SMG) are lexical affixes and they attach to prosodic words in the lexicon. It is assumed that CG clitics are of type A on the basis of their similarity in distribution with type A clitics in other Greek varieties. Specifically, clitics of type A comparable to CG clitics immediately follow the finite verb, unless they appear in negative clauses, in subjunctive or future tense clauses, in wh−phrases, after relative pronouns (Janse 1998), or after subordinating complementizers and preverbal phrases in focus; in all the aforementioned syntactic contexts clitics immediately precede their verbal host.

Condoravdi and Kiparsky (2001:5) assume the clause structure in (8) for all Greek dialects with X^{max} clitics.

(8) $[_{CP}$ Spec $[_{C'}$ C $[_{\Sigma P}$ Spec $[_{\Sigma'}$ Σ^0 $[_{TnsP}$ Cl $[_{TnsP}$ Spec $[_{Tns'}$ Tns^0 VP]]]]]]]

They further assume that finite verbs move from V to the head of TnsP and that there is a higher inflectional projection ΣP, composed of NegP, MoodP, and FocP[23] (cf. Laka 1990, Piñón 1993), dominating TnsP. ΣP is headed by negative and modal particles, while focused XPs and emphatic negatives surface in its Spec position. According to Condoravdi and Kiparsky (2001), clitics adjoin to TnsP,

[22] The proposal does not discuss CG data in particular, but rather data from a set of dialects that includes CG. The analysis presented applies to varieties spoken in the following areas: inland Asia Minor (Cappadocia, Bithynia), the Cyclades, some Dodekanese islands (Karpathos, Kos, Astypalaia), two localities on Lesbos (Ajassos, Plomari), and the Taur−Roumeic dialects of Ukraine (Marioupoli/Azov). Late Medieval Greek is a Greek variety of this type as well.

[23] Condoravdi and Kiparsky indicate that their analysis would be consistent with an expansion of ΣP into its component parts, namely the relevant heads (2001:34, note 10).

the functional projection to whose head the verb moves to. Their placement is attributed to a prosodic requirement according to which a prosodic word should appear on their left within the same CP. This prosodic word should be a non−adjoined constituent, i.e. a lexical (overt) complementizer (in C^0), a wh−element (in SpecCP) in matrix or embedded interrogatives, a negative or modal particle (in Σ^0), or a focused constituent (in SpecΣP). If no suitable prosodic host is available, the clitic pronouns encliticise onto the verb on their right by prosodic inversion (Halpern 1995).

From an Optimality theoretic perspective, Condoravdi and Kiparsky view prosodic inversion as an optimisation strategy which aims at satisfying both the prosodic and the syntactic requirements of clitic pronouns. To satisfy the former clitics have to encliticise to some constituent on their left; to satisfy the latter the input order has to be preserved in the output, with clitics remaining within the same CP.

As Condoravdi and Kiparsky indicate (2001:7), within their account the default case for clitic positioning in type A dialects is the pre−verbal one. The post−verbal placement involves an extra step. Moreover, they assume the same clause structure for type A and type C dialects, such as CG and SMG respectively. They attribute the differences in clitic placement to the different prosodic requirements of clitics in the two types of dialect (2001:16). Specifically, they claim that type C clitics are affixes, which subcategorize for a phonological word on their right, while type A clitics subcategorize for a phonological word on their left. Hence, type C clitics do not attach syntactically to TnsP but lexically to the left of a finite verb[24]. The clitic–verb cluster then moves as a whole to TnsP. In contrast, type A clitics move to TnsP in the overt syntax. Within Condoravdi and Kiparsky's account (2001), CG clitics are inherently enclitic and attach phonologically to any preceding constituent that meets their prosodic requirements.

However, Condoravdi and Kiparsky's account (2001) can be challenged on the basis of the following facts. First, pre–verbal NPs in Topic position trigger

[24] Their assumption for the phrase structure status of type C clitics, hence for SMG clitics as well, is that they are word−level affixes; that is, affixes that attach to words, not to stems (like subject agreement morphemes) (2001:16).

enclisis, whereas complementizers like *oti* and *pos* can co–occur with post–verbal clitics. Second, operations such as movement and linearisation of constituents are standardly perceived as syntactic. Within such an analysis, we need to assume a very powerful PF that is able to move syntactic constituents and "regulate" the linear order of the clause. This is not theoretically desirable and is something that diverges from typical PF operations.

3.4. Interface accounts

Mavrogiorgos (2012) and Revithiadou (2008) have proposed analyses that capitalise on the role of the syntax–PF interface for clitic placement in CG. These are discussed in the following subsections.

3.4.1. The syntax–PF interface analysis for Tobler–Mussafia languages

Mavrogiorgos (2012) discusses the proclisis–enclisis alternation in finiteness–sensitive and Tobler–Mussafia languages. This section summarises his proposals focusing on the aspects of the analysis that are relevant for CG.

Following Pancheva (2005), Mavrogiorgos assumes that Tobler–Mussafia languages impose the following PF requirement on clitics: a ban from the initial position of a prosodic domain, e.g. of the utterance. He suggests that finite enclisis in Tobler–Mussafia languages in general, and in CG in particular, derives via verb movement across the cliticization site, which is yet triggered by PF–requirements. To elaborate, according to Mavrogiorgos (2012), finite enclisis involves a F(unctional) head, an abstract syntactic category, which immediately c–commands the cliticisation site (T). This C–head, which is linked to enclisis in both finiteness–sensitive and Tobler–Mussafia languages, is a phase head; a syntactic Agree relationship is established between the F–head and the lower T–head (2012:31–32). The F head carries (CP–related[25]) syntactic features, which

[25] For Mavrogiogos what differentiates the F–head involved in finite enclisis and the F–head involved in non–finite enclisis is the fact that the latter carries features that are linked to subject, tense and/or mood agreement, while the former carries CP–related features (2012: 29–30).

are taken by Mavrogiorgos to be affixal[26], and a PF requirement.

If an appropriate XP or X is merged at the edge of the F head and has established a syntactic relationship with it, the PF–requirement of these features is satisfied; notably, the relevant XP or X must be related in terms of syntactic features with the feature(s) on the head. The F head may surface with different features, including the following: neg, foc, wh, inter, topic. In CG negative clauses, for example, as well as in clauses headed by wh–elements or modal particles, inter alia, the features of the F head are satisfied, so the verb does not move higher than the cliticization site and proclisis obtains. When no appropriate XP or X is available to satisfy the PF–requirement of the relevant feature(s), the verb cannot be spelled out in the lower T position, and moves to F at PF to satisfy the PF–requirement; this is possible as both the verb in T and the F head share a V–feature. Verb movement is manifested in another two instances. First, when an XP or X is present but cannot establish a syntactic relationship with the F–head. Second, when an XP is present and able to establish a syntactic relationship with the F–head but unable to satisfy the PF requirement of the relevant feature(s) (i.e. when it is not merged at the edge of the F–projection) (Mavrogiorgos 2012:33). As a result, reordering of the clitic–verb cluster is manifested at PF and enclisis obtains.

Crucially, the main assumption within Mavrogiorgos' account is the PF nature of verb movement in finite enclisis: the verb moves to F, if the PF/morphological requirement imposed by the F–head has not been satisfied at syntax.

3.4.2. The PF−controlled spell−out of copies

Revithiadou (2006) offers an interface account for cliticisation in CG in the spirit of Franks (1998, 2000), Bošković (2000, 2001) and Franks and Bošković (2001). She proposes that the syntax deals with movement operations and provides pairs of equally well−formed syntactic structures (with the clitic placed both pre− and

[26] Mavrogiogos takes these inflectional features to be affixal, hence, the triggering of V–movement to the relevant C–head at PF (2012:30, footnote 11).

post−verbally) and phonology has a filtering role on the syntactic output. A basic tenet of her analysis is that the prosodic system not only determines how clitics are to be incorporated in the prosodic structure (as Prosodic Words or Phonological Phrases), but also whether they will precede or follow the verb.

Revithiadou claims that syntax alone cannot provide a satisfactory account for the CG facts and bases her argumentation on examples like (9−10), which show that a complementizer does not always provide a context for a pre−verbal clitic (9) and that the presence of a heavy wh−phrase like *pjos pu ulus tus athropus* in (10) cannot guarantee the clitic−verb order (Revithiadou 2006:93). She takes these facts to indicate that constraints on phonological phrasing are involved in clitic placement.

(9) Lali oti / pos ton aghapa / aghapa ton.
Say−3S that him−CL.ACC love−3S
"S/he says that s/he loves him"

(10) Pjos pu ulus (tus athropus) ethkjavasen to?
Who of all−ACC.PL (the people−ACC.PL) read−3S it−CL.ACC
"Which one out of all (the people) read it?"

Revithiadou extends Bošković's (2001) analysis of second position effects in Serbo−Croatian and Bulgarian to account for clitic placement in CG. Bošković (2001) proposes that syntax places the clitics both pre− and post−verbally and pre−specified phonological matrices select the optimal case. This analysis is built upon ideas in Franks (1998) and Franks and Bošković (2001), where it is suggested that pronunciation of chains[27] created by movement of some element is decided in PF, and hence the deletion of copies is phonologically motivated. Within this account, the default case is for a chain to be pronounced in the head position[28, 29], unless this leads to a PF violation. In the latter case, a lower member

[27] Chomsky (1993, 1995) argues that an element that undergoes movement leaves behind a copy so that syntax does not create new elements (Inclusiveness Condition). Syntactic operations conform to the IC and only re−arrangement of elements already inserted from the lexicon is possible.

[28] This is imposed by the HEAD CHAIN, a constraint that determines that the highest copy of the chain is realised. Revithiadou claims that this constraint is based on PRONOUNCE HIGHEST (see footnote 29). The "head of a chain" is the highest copy in a series of copies left behind by the

of the chain is pronounced, which best satisfies the prosodic requirements of the language.

Within Revithiadou's (2006) account, clitics in CG are generated in VP and they then left−adjoin to the inflectional head to which the verb raises. The decision of which copy of the clitic will be pronounced relies on the prosodic system, which performs the overall prosodic organisation of the syntactic strings. The assignment of prosodic structure to all syntactic strings − to clitic constructions as well − adheres to the language−specific hierarchy of prosodic constraints (p−constraints), comprised of prosodic domination and alignment constraints. The copy of the clitic that best satisfies these constraints is ultimately spelled out.

In CG, when no other material is located before the verb, the lower copy of the clitic, namely the one immediately following the finite verb, is obligatorily realised. Conversely, when some element that can satisfy the clitic's prosodic requirements is present, the head of the chain is pronounced, namely the clitic that immediately precedes the finite verb. In imperatives, however, where the verb raises as high as C (Terzi 1999a), the phonology has no option but to parse the lower clitic.

Turning now to the specifics of the prosodisation of pronominal clitics in CG, I offer a summary of Revithiadou's (2006) approach, which is formulated within Optimality Theory (Prince & Smolensky 1993) and is built on Selkirk's (1995) assumptions on the prosodisation of function words. Revithiadou's (2006) central claim is that the ranking of p−phrasing constraints determines not only how CG clitic pronouns are prosodically organised, but also how they are ordered with respect to the verb. She uses Selkirk's (1995) prosodic typology of clitics, cited below (11) (Revithiadou 2006:84), to show how CG clitic−host combinations are prosodically organised.

(11) a. $[\text{word cl}]_{\text{PrW}}$ internal clitic

b. $[[\text{word}]_{\text{PrW}}\ \text{cl}]_{\text{PrW}}$ affixal clitic

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movement of some element (Revithiadou 2006:96, note 18).

[29] Franks assumes the constraint PRONOUNCE HIGHEST that states that "lower identical copies are silent" (2000:28).

c. $[[word]_{PrW}\ cl]_{PPh}$ free clitic

d. $[word]_{PrW}\ [cl]_{PrW}$ prosodic word

According to the four major patterns outlined in (11), clitic pronouns can be realised as:

1. Internal clitics (11a), when dominated by the PrW of the lexical word, i.e. of the verb.
2. Affixal clitics (11b), when they adjoin to the PrW of their host, forming a nested PrW structure.
3. Free clitics (11c), in which case they skip the intermediate PrW−level and are parsed by the higher phonological phrase (PPh).
4. Independent prosodic words, as in (11d).

The patterns in (11) arise from the interaction of Selkirk's constraints on prosodic domination (Selkirk 1995:443), outlined in (12) [where C^n = some prosodic category], and a set of alignment constraints outlined in (13) (Revithiadou 2006:85).

(12) a. LAYEREDNESS: No C^i dominates a C^j, $j > i$.

b. HEADEDNESS: Any C^i must dominate a C^{i-1}.

c. EXHAUSTIVITY: No C^i immediately dominates C^j, $j < i - 1$.

d. NON RECURSIVITY: No C^i dominates C^j, $j = i$.

(13) a. WORD CONSTRAINT (WCON): Align (LexWord, L/R; PrW, L/R)

b. PRW CONSTRAINT (PCON): Align (PrW, L/R; LexWord, L/R)

The alignment constraints control the mapping of morpho−syntactic constituents to prosodic structure and require that the edges of a prosodic constituent are aligned with the edges of a morpho−syntactic constituent (Revithiadou 2006:85). For Revithiadou (2006:85, 2008:1399 and references therein) the alignment constraints refer only to the edges of lexical but not functional categories. Hence, with respect to clitic constructions, the alignment constraints are biased towards an output in which the verb sustains alignment between its morphological and phonological edges, and therefore an output in

which the clitic prosodises with the function word and not with the lexical word, i.e. the verb, is favoured.

Revithiadou adopts the constraints on prosodic domination in (12) and the alignment constraints in (13) to develop the constraint ranking for clitic prosodisation in CG, outlined in (14). Apart from the constraints in (12) and (13), (14) also includes FAITH, a constraint that spells out the following rule: "Preserve an inherent accent of the input in the output" (Revithiadou 1999; 2006:87). Moreover, two constraints on prosodic domination are precluded from (14), namely LAYEREDNESS and HEADEDNESS. This is because both constraints are, according to Revithiadou, universally inviolable, and can therefore not be dominated, in Optimality theoretic terms. In contrast, EXHAUSTIVITY and NON RECURSIVITY are violable and favour an alignment that causes the fewest violations. In effect, the ranking of EXHAUSTIVITY and NON RECURSIVITY has an important role to play in clitic prosodisation and placement. All in all, the hierarchy in (14) determines the prosodisation of clitic pronouns in CG, namely whether they prosodically incorporate into their host or adjoin to it, as well as their ordering with respect to the verb. Notably, when alignment constraints are outranked by the constraints on prosodic domination, clitic incorporation into the PrW of the host is induced.

(14) FAITH (acc), EXH, WCON (L), NON REC >> PCON, WCON (R)

On the basis of Selkirk's (1995) clitic typology, Revithiadou (2006, 2008) argues that CG enclitics are identified as internal clitics, in that they incorporate into the same prosodic word (PrW) as their verbal host. She justifies her claim on the basis of the following facts. Firstly, sandhi rules apply in verb−clitic clusters; recall that the domain of application of such rules is the PrW. Examples such as /'ipes mu/ ("you told me") parsed as: ['ipezmu]$_{PrW}$, where s−voicing applies, and /'fere to/ ("bring it") parsed as: ['ferto]$_{PrW}$, where e−deletion applies, offer the necessary pieces of evidence. Secondly, a secondary/rhythmic stress develops to repair violations of the three−syllable stress window rule caused by clitic insertion. For example, a double clitic construction like /'ipen mu to/ ("s/he said it

to me") will be stressed as follows: /'ipem 'mu to/ (Revithiadou 2006:84, 2008: section 3.2.2)[30]; see also the discussion in section 2.2.5 of chapter 2.

Within Revithiadou's (2006, 2008) analysis, clitic pronouns in CG need to have some other constituent on their left in order to appear pre−verbally. Function words such as modal markers, negation particles and complementizers, provided they lack stress, incorporate together with the clitic into the verbal host. Crucially, the function word–clitic sequence in CG remains un−footed and adjoins recursively to the PrW of the verb as follows: [fnc cl $[V]_{PrW}]_{PrW}$. In this case, clitics are realised as affixal elements. Evidence that the function word, the clitic and the verbal host are parsed into the same PrW is offered by the application of sandhi rules, such as s−voicing and intervocalic voiced fricative deletion (Revithiadou 2006; 2008) in this type of construction[31]. Examples (15), (Revithiadou 2006:86) and (16) (Revithiadou 2008:1403) respectively offer evidence for the application of these operations.

(15) /pos mas ghi'refki/
COMP us−CL.ACC looks for−3S
"That s/he looks for us"
Parsed as: [poz maz ghi'refki]

(16) /na mu 'dhokis/
M me−CL.GEN give−2S
"To give me"
Parsed as: [na mu 'okis]

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[30] The use of this secondary or rhythmic stress in verb−clitic combinations is also mentioned by Mavrogiorgos as evidence in favour of the argument that enclitics in SMG attach to their host's PrW (2009:54−55).

[31] Revithiadou (2006:86, 2008: section 3.2.2) assumes that in CG, apart from s−voicing and intervocalic voiced fricative deletion, another rule is applicable, namely the fusion of the /u, o/ + /e/ sequence into [o]. I use example (1) (Revithiadou 2006:86) to illustrate this point. However, in my grammar, the fusion of /u/ + /e/ sequence into [o] in such an example is not felicitous, unlike the fusion of the /o/ + /e/ sequence into [o], which is; see example (2).

1. /pos tu e'thkjavasen/
COMP him−CL.GEN read−3S
"That s/he read to him"
Parsed as: [pos to 'thkjavasen]

2. /pos tu to e'thkjavasen/
"That s/he read it to him"
Parsed as: [pos tu (t)o 'thkjavasen]

Revithiadou points out the difference between an enclitic, which incorporates into the same PrW as its verbal host, and a proclitic with an unstressed function word, which joins into a recursive PrW structure with the verb. She takes the following observation as evidence for her claim: re−syllabification is only allowed with enclitics, as in /'ipes mu/ ['ipe.zmu] (“you told me”), but is blocked with proclitics, as illustrated in /pos mas ghi'refki/ [pozmaz.ghi'refki] (“that s/he looks for us”) (2006:86).

If the function word that heads the clitic construction is stressed, a different picture arises: the clitic attaches to the function word to its left to form with it an independent prosodic constituent and the verb is realised into a separate PrW. Examples (17−18) taken from Revithiadou (2006:87) illustrate this point.

(17) /'pcos tu e'thkjavasen/
who him−CL.GEN read−3S
“Who read to him?”
Parsed as: ['pjostu]$_{PrW}$ [e'thkjavasen]$_{PrW}$

(18) /'enna sas 'dhoki /
M you−CL.GEN give−3S
“S/he will give you”
Parsed as: ['enna sas]$_{PrW}$ ['dhoki]$_{PrW}$

A piece of evidence that supports the proposed prosodic pattern comes from vowel epenthesis (Revithiadou 2008:1402). When epenthesis occurs in CG the epenthetic vowel *i* is inserted between the clitic and the verb in order to repair illicit consonant clusters, as in (19) (Revithiadou 2008:1402). Crucially, vowel epenthesis does not apply within the PrW domain. This suggests that the functional word–clitic string is prosodically hosted by the verb but only at a recursive level; if the clitic were prosodically incorporated into the verb, assimilation rather than vowel epenthesis would apply.

(19) /'enna ton – i – 'ftaso/
M him−CL.ACC reach–1S

"I will reach him"

Revithiadou (2006) claims that further evidence in favour of the argument that the clitic and the verb do not belong to the same PrW in constructions with stressed functional elements is offered by examples like: /'pcos tu e'thkjavasen/ in which vowel−fusion (of an underlying /u, o/+/e/ sequence into [o]) between the final vowel of the clitic and the initial vowel of the immediately following verb is blocked, and /'enna sas 'dhoki/ where s−voicing of the final /s/ of the clitic is blocked, even though it is immediately followed by a fricative. Recall that s−voicing and vowel fusion are PrW rules.

The alignment for the clitic−verb cluster when preceded by a stressed function word is determined by the ranking of the constraints on prosodic domination outlined in (14). Specifically, since FAITH is ranked above PCON, the prosodic boundaries of the clitic pronoun cannot fuse with the prosodic boundaries of the verbal host. Moreover, the incorporation of the pronominal clitic into the stressed function word elicits fewer violations of PCON, since the latter prohibits the matching of non−lexical morphological boundaries to prosodic ones.

Coming back to example (9), let us see how this can be accommodated within Revithiadou's (2006) account. The alternation in clitic placement is the result of variation in p−phrasing and, in particular, of the enforcement of the binarity requirement. This constraint requires that pairs of PrWs are grouped together in p−phrases. The p−phrasing when the clitic is post−verbal is performed as follows: $[[la'li]_{PrW}$ $['oti]_{PrW}$ $]_{PPh}$, with the first p−phrase complying with binarity. The p−phrasing when the clitic is pre−verbal is performed as follows: $[['oti\ ton]_{PrW}$ $[agha'pa]_{PrW}]_{PPh}$, with the second p−phrase complying with binarity. Following the same line of reasoning we can accommodate (10) as well: while a wh−element and the clitic form a single p−phrase, the heavy wh−phrase in (10) forms a p−phrase individually, forcing the verb and the clitic to form another p−phrase, within which the clitic occupies the position on the right of the verb. The same line of reasoning applies to constructions involving adjuncts. The blocking of cliticisation across an adjunction boundary can be attributed to the

fact that peripheral adjuncts, such as clitic−doubled DPs, form independent p−phrases (Revithiadou 2006:93).

Finally, under the proposed framework, the dialectal variation between CG and SMG is captured as well[32]. SMG adheres to the HEAD CHAIN constraint, hence the highest copy of the chain is always realised and proclisis obtains. The lower copy is only realised when the verb raises to a functional projection higher than I, i.e. in imperatives and gerunds. In CG the surface position of clitics is regulated by the prosodic system, on the basis of the language−specific constraint ranking outlined in (14).

In sum, within Revithiadou's (2006) analysis, CG clitics appear pre−verbally when a functional constituent is realised in the same CP on the left of the clitic and post−verbally when no such element is present. With respect to the prosodisation of clitic constructions in CG, it is suggested that this is regulated by the constraint ranking in (14), specifically concerning the hierarchy of constraints on prosodic domination (12) and the alignment constraints (13). Clitic pronouns in CG are prosodically organised in the following three ways (Revithiadou 2006:99; 2008:1404):

1. As internal enclitics: [V cl]$_{PrW}$
2. As affixal proclitics (with unstressed function words): [fnc cl [V]$_{PrW}$]$_{PrW}$
3. As prosodic words (with stressed function words): [fnc cl]$_{PrW}$ [V]$_{PrW}$

Post−verbal clitics are always incorporated into the PrW of their verbal host. On the basis of the constraint ranking in (14), repeated here for ease of reference: [FAITH (acc), EXH, WCON (L), NON REC >> PCON, WCON (R), WCON L], the optimal structure for the clitic is to incorporate into the PrW of its verbal host: [V cl]$_{PrW}$ and not to recursively adjoin to it: [cl [V]$_{PrW}$]$_{PrW}$ (or its mirror image). Pre−verbal clitics are either parsed together with the preceding (stressed) function word or they join into a recursive PrW structure with the (unstressed) function word and the verb. When a stressed function word is involved, the template [fnc cl]$_{PrW}$ [V]$_{PrW}$ is preferred over [fnc]$_{PrW}$ [cl [V]$_{PrW}$]$_{PrW}$,

[32] Revithiadou (2008) takes this claim one step further and suggests that the phonological component determines the evolution of cliticisation in Greek and, more specifically, the transition from a system with (mostly) second position clitics (2P), like CG, to a non−2P system, like SMG.

so that the verb (lexical word) will keep the transparency of its edges (Revithiadou 2008:1408). With unstressed function words, the template [fnc cl $[V]_{PrW}]_{PrW}$ is preferred over [fnc $[V]_{PrW}$ cl$]_{PrW}$ because in the former case the verb preserves at least its right alignment with the PrW (Revithiadou 2008:1408−09). All in all, Revithiadou's (2006) proposal underlines the truly interface−dependent nature of cliticisation in CG and offers an account of exactly how the syntax interacts with phonology.

3.5. A dynamic account

Chatzikyriakidis (2010, 2012) has recently put forward a dynamic account for clitic positioning in Cypriot Greek. This account is developed within the framework of Dynamic Syntax (DS), a processing oriented framework. Its basic tenet is that natural language syntax can be seen as "the progressive accumulation of transparent semantic representations with the upper goal being the construction of a logical propositional formula" (Chatzikyriakidis 2012:648). For DS, syntactic differences across languages derive from different lexical specifications. As regards clitic placement in CG, and in general, it is treated as a lexical phenomenon. In particular, it is assumed that clitic pronouns are inserted as lexical entries and three generalized parsing strategies (general actions of structure building, i.e. the unfixed node strategy) are employed, depending on the structural context, as triggers for parsing the clitic pronouns. Positioning restrictions are, thus, viewed as a number of triggering points that, if satisfied, regulate clitic positioning. This approach won't be further discussed as the framework within which is developed is at odds with the assumptions regarding the computational system adopted in this thesis. The interested reader is directed to Chatzikyriakidis (2010, 2012) for a thorough presentation of both the framework of Dynamic Syntax and the proposed analysis for clitic positioning in CG.

3.6. Interim conclusions for clitic placement in CG

On the basis of the above discussion and taking into account the various aspects of clitic placement in CG, a number of conclusions can be drawn:

1. The requirement of CG clitics for verb adjacency illustrates their structural and/or prosodic dependency on their verbal host.
2. Their ban from clause initial position illustrates the effect of prosodic requirements on the well−formedness of clitic constructions in CG.
3. CG clitics are not inherently enclitics.
4. Syntax plays an important role in clitic placement in CG.
5. The enclisis−proclisis alternation in CG is not contingent on the finiteness of the verbal host.
6. The enclisis−proclisis alternation in CG cannot be attributed either to pure syntactic or to pure prosodic operations.

Let us briefly discuss these concluding remarks one by one.

3.6.1. Verb adjacency and structural and/or prosodic dependency

The requirement for verb adjacency imposed on CG clitics illustrates the structural and/or prosodic dependency of clitic pronouns on their verbal host. This property is not adequately accounted for in the majority of the accounts proposed so far. Terzi (1999a, 1999b) and Mavrogiorgos (2012) assume that the clitic and the verb adjoin to distinct functional projections. Condoravdi and Kiparsky (2001) suggest that clitics in CG are prosodically required to encliticise to a constituent on their left, with no special reference to the (always adjacent) finite verb. Agouraki's proposal (2001) is even weaker in this respect, as it treats clitic placement as a mere epiphenomenon of verb placement. However, within Revithiadou's (2006) account this is adequately accommodated.

3.6.2. The ban from clause initial position

CG clitics can never appear clause initially. This Tobler–Mussafia effect indicates

that their placement depends on prosodic constraints as well. However, the position that clitics occupy in the clause does not seem to depend on any inherent preference for enclisis, as argued by Condoravdi and Kiparsky (2001). The approach I adopt with respect to the ban of clitic pronouns from clause initial position in CG is in line with Mavrogiorgos' (2012) proposal: this seems to be related to an absolute PF requirement stating that clitics cannot appear in the first position of a prosodic domain represented by the utterance.

3.6.3. CG clitics are not inherently enclitics

Revithiadou (2006, section 3.1.) discusses the prosodic behaviour of CG clitics and shows that they do not always encliticise to a constituent at their left, but occasionally procliticise to a constituent on their right. She bases her argumentation on constructions such as: /pos mas ghi'refki/ parsed as follows: [poz maz ghi'refki] ("That s/he looks for us") (2006:86). In such a construction s−voicing, whose domain of application is the PrW, is applied on the clitic–verb cluster, showing that the clitic ultimately procliticises to the verb; it recursively adjoins to the PrW of the verb together with the function word. These facts question the assignment of an enclitic template to CG clitics (as per Condoravdi and Kiparsky 2001).

3.6.4. The role of syntax

A general theoretical conclusion regarding the proclisis−enclisis alternation in CG is that it complies with various structural rules and restrictions imposed on clitic pronouns. As already discussed, CG clitics must be verb−adjacent. Moreover, clitic placement in CG is regulated by the presence/absence of a functional head c−commanding the cliticisation site (Agouraki 2001, Mavrogiorgos 2012, Terzi 1999a, 1999b). The selective blocking effect of different types of XPs/Xs on enclitic orders establishes the crucial role syntax plays in clitic placement in CG. Finally, as observed by Revithiadou (2006:92), clitic constructions obey locality restrictions.

3.6.5. Enclisis−proclisis alternation and finiteness

In Mavrogiorgos' (2012) classification, clitic languages belong to two different groups depending on whether finiteness determines clitic placement. In finiteness–sensitive languages, such as SMG, Romanian, Italian, Catalan and Spanish, proclisis is manifested with finite verbs and enclisis with non−finite verbs (or verbal hosts which are defective in terms of tense, mood and/or subject agreement). In Tobler–Mussafia languages, on the other hand, both finite and non−finite enclisis is attested, indicating that clitic placement is not contingent on the finiteness of the verbal host. CG, European Portuguese, Old Romance and Medieval Greek belong to the latter type.

However, with regard to the derivation of non−finite enclisis, CG resembles SMG and other finiteness–sensitive languages in that it involves syntactic movement of the verb past the cliticisation site. The assumption of the manifestation of V−to−C by the imperative verb is in line with the majority of the approaches discussed above (Agouraki 2001, Terzi 1999a, Revithiadou 2006). I adopt Mavrogiorgos' (2009) proposal that non−finite enclisis correlates with the presence of an unvalued person feature in T (suggested for SMG imperatives), and argue that this also accounts for CG imperatives on the basis of the similarity between CG and SMG imperative clauses (20). According to Mavrogiorgos, the blocking effect of modal and negative particles on the movement of the imperative verb in CG can be explained in syntactic terms: it is either an intervention effect or an instance of complementary distribution between the (modal or negative) particle and verb−related features (2012:19−20).

(20) (*Na / *Min) Fer to piso amesos. (CG / SMG)
M NEG bring−2S it−CL.ACC back immediately
"(*To/Not) Bring it back immediately"

In sum, finite and non−finite enclisis in CG cut across different lines, in spite of the similarities in the spell−out structure. The V−to−C movement of the imperative verb in non−finite enclisis is attributed to syntax, while finite enclisis

is the result of operations at the syntax−phonology interface.

3.6.6. Enclisis−proclisis alternation: neither pure syntax nor pure PF

Clitic placement in CG cannot be attributed either to purely syntactic or to purely prosodic operations. A purely prosodic account, like the one put forward by Condoravdi and Kiparsky (2001), is challenged on the basis of the following facts. First, CG clitic pronouns can be both proclitic and enclitic to their host (cf. section 3.6.3). Second, it is not the case that any preceding element can satisfy their PF−requirements: some of the elements that surface in the CP domain trigger proclisis (e.g. the factive complementizer *pu*), while others trigger enclisis (e.g. topics). Moreover, complementizers like *oti* and *pos* trigger both patterns. In addition, as Revithiadou (2006:92) observes, it is theoretically undesirable to have an excessively powerful phonology that can move syntactic entities.

However, prosody cannot be disregarded either and a purely syntactic account is also ruled out on the basis of the following facts. First, PF−requirements that are independent of the clitic PF properties play a crucial role in clitic placement in CG, as clitic constructions are subject to certain phonological well−formedness constraints, e.g. the ban from clause initial position (section 3.6.2). Second, all the syntactic analyses so far proposed lack any real motivation for verb movement[33], which is claimed to constitute the triggering force for post−verbal placement in finite enclisis (cf. section 3.2.1, 3.2.2).

Notably, as Terzi (1999b:232−233) observes, verb movement in CG cannot be attributed to strong features of the finite verb, in line with proposals for EP (another Tobler−Mussafia language). For EP there is independent evidence

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[33] Mavrogiorgos (2012:23−24) has shown that for SMG the verb movement across the cliticisation site is not a sufficient condition for enclisis. Compare examples (1) and (2). It is obvious that no re−ordering of the verb and the clitic is possible irrespective of the position that the clitic−V / V−clitic cluster occupies.

(1) Ta kerdhi tu schedhon ta triplasiase
The winnings−ACC his−POSS almost them−CL.ACC tripled−3S
o Jianis.
the John−NOM

(2) Ta kerdhi tu ta triplasiase schedhon o Jianis.
"John almost tripled/already tripled his winnings"

justifying this line of reasoning. First, EP is a language with inflected infinitives. Second, EP, unlike CG, allows VP−deletion in examples like (21) (Terzi 1999b:232). Thus, it is not unjustified to assume that the strong Σ or F features of the EP verb trigger V−to−Σ or V−to−F movement, which results in enclisis. However, given the absence of both inflected infinitives and verb deletion, this assumption cannot be extended to CG.

(21) Deste−lhe o livro
Gave him the book
(Sim), dei.
Yes, gave.

Finally, as Revithiadou (2006:82−83, 89) observes, both the prosodic and syntactic approaches fall short in explanatory power with respect to constructions headed by wh−elements. While wh−words typically trigger pre−verbal clitic placement, in some (heavy) wh−phrases the clitic pronoun encliticises on the verbal host (cf. section 3.4.2).

3.7. Summary

This chapter has discussed a number of accounts of clitic placement in CG − syntactic, prosodic and interface–based – offered over the last twenty years. The review has included the V−to−M proposals for finite enclisis put forward by Terzi (1999a, 1999b), Agouraki's (2001) proposal for the filled−C requirement of CG, the syntax−PF interface analysis for Tobler–Mussafia languages by Mavrogiorgos (2012), Revithiadou's (2006) proposal for a PF−controlled spell−out of copies, and the Prosodic Inversion account by Condoravdi and Kiparsky (2001), summarised in the last section. The discussion in this chapter provides the background for the hypotheses and predictions to be tested in the empirical section.

CHAPTER 4: THE L1 ACQUISITION OF CLITICS

4.1. Introduction

This chapter discusses first language acquisition (L1A) of clitic pronouns cross–linguistically. Recall that, following Mavrogiorgos (2012), I adopt a tri–partition with respect to the types of clitic languages, distinguishing finiteness–sensitive languages (like Catalan, Italian, Romanian, Spanish and Standard Modern Greek amongst others), Tobler–Mussafia languages (like Cypriot Greek, European Portuguese and Galician), and second position languages (e.g. Serbo–Croatian).

Clitic production in early language has two aspects: the emergence of clitic pronouns and their placement. The focus of the majority of studies so far conducted on clitic L1A has been clitic realisation and omission and the attested dichotomy among early clitic languages: some exhibit clitic omission and some others exhibit adult–like clitic production[1]. The discussion of early CG and early EP data reveals another interesting, albeit under–studied, aspect of early clitic production: the phenomenon of clitic misplacement. This phenomenon is absent in the majority of clitic languages, with the interesting exceptions of CG and EP. The presence/absence of clitic misplacement in early grammars offers an alternative way of classifying clitic languages based on the placement rather than on the emergence of clitic pronouns in child language.

The organisation of the current chapter follows the aforementioned tri–partition: the first section discusses acquisition studies in finiteness–sensitive languages, including Catalan, Italian, Romanian, Spanish and SMG. The second section focuses on Serbo–Croatian, a representative example of a language with second position restrictions with regard to clitic placement. The third section presents acquisition data from Dutch, a language exhibiting clitic scrambling, and the fourth section discusses clitic L1A in Tobler–Mussafia languages, including CG, EP and Galician.

[1] See Tsakali and Wexler (2004), Tsakali (2006) and Wexler et al. (2004) for a proposal put forward to account for this divergence between clitic languages.

4.2. Finiteness–sensitive languages

Clitic placement in most Romance languages, including Italian, Romanian, Spanish and Catalan (with the interesting exception of EP), as well as in SMG depends on the finiteness of the verbal host[2], hence reference will be made to finiteness–sensitive languages, a term suggested by Mavrogiorgos (2012). A number of influential studies on clitic L1A in Catalan, Spanish (Wexler et al. 2004), Italian (Guasti 1993/94, Schaeffer 2000), Romanian (Avram 1999, Avram & Coene 2007, Babyonyshev & Marin 2006) and SMG (Marinis 2000, Stephany 1997, Tsakali 2006) have revealed patterns of clitic omission for some of these languages, to a greater or lesser degree, whereas instances of clitic misplacement were sparsely attested.

4.2.1. Italian

The L1 acquisition of clitic pronouns in Italian was investigated by Guasti (1993/94) and Schaeffer (2000), amongst others, on the basis of spontaneous and experimental data respectively. Clitics in Italian, parallel to other finiteness–sensitive languages, surface pre–verbally in finite clauses and post–verbally in infinitival clauses. When the infinitive is governed by modal, causative or aspectual verbs the clitic may either immediately follow the infinitive or immediately precede the finite verb; the latter pattern is known as clitic climbing (Guasti 1993/94:13).

Guasti takes clitic placement as a reliable cue to establish children's knowledge of the (non–)finite nature of the relevant verbal host, and studied natural production data from 3 monolingual Italian children: Martina (1;8–2;7), Diana (1;10–2;6) and Guglielmo (2;2–2;7) (CHILDES database). Her analysis is based on a total of 534, 660, and 217 utterances for Martina, Diana, and

[2] An interesting proposal put forward by Mavrogiorgos (2009) builds on the correlation of non–finite enclisis with the presence of an unvalued person feature in T to explain the enclisis–proclisis alternation in SMG, a proposal that may be applicable to other languages that fall within this group.

Guglielmo, respectively, and the individual results are summarised in table 4.1[3, 4]. The table presents raw numbers of (pre–verbal) clitics produced or omitted in finite contexts. As for infinitival contexts, no child produced any post–verbal clitics following an infinitive before the age of 2; Martina produced 1 clitic between ages 2;1 and 2;7, Diana produced 2 clitics from age 2;1 to 2;6 and Guglielmo produced 5 clitics between 2;2 and 2;7 years of age (see table 8 in Guasti 1993/94:18).

Age	Martina		Diana		Guglielmo	
	Omission	Pre–verbal	Omission	Pre–verbal	Omission	Pre–verbal
1;8	3	8				
1;9	–	2				
1;10	5	4	1	4		
1;11	14	2	2	1		
2;0			3	3		
2;1	3	5	4	13		
2;2					2	7
2;3	8	17			1	3
2;4	6	18			1	14
2;5	1	11	2	47	–	10
2;6			7	107		
2;7	2	25			4	42

Table 4.1: Production of pre–verbal clitic pronouns in early Italian (based on tables 5–7 in Guasti 1993/94:15–16).

The results obtained reveal that Italian children have low clitic production up to the age of 2;3. From approximately age 2;5 onwards (2;3 for Martina; 2;5 for Diana; 2;7 for Guglielmo) their clitic production is good. Guasti attributes the rather delayed acquisition of cliticisation and the optional use of clitics at the onset of L1A to difficulties in forming A–chains[5] (in line with Antelmi 1992) and

[3] Guasti disregards from her calculations clitics for which a corresponding complement does not exist, including impersonal *si*, inherent *si* or the clitic *ci*, which is not used in Standard Italian (1993/94:17).

[4] I only report the results for the production of clitic pronouns, leaving aside the other two types of syntactic elements produced by children and reported by Guasti, namely cliticisable complements and pre–syntactic devices. In Guasti's wording the latter constitute "undifferentiated phonetic segments that are likely to be the precursors of certain syntactic entities" (1993/94:17).

[5] Guasti assumes that clitics are originally inserted as heads of a maximal projection in the complement position. Then, they undergo A–movement to the Specifier of AgrOP and from there the head containing the clitic undergoes head–movement to the designated functional head I (1993/94:18–19).

to the optionality of functional categories in child Italian grammar[6].

A legitimate objection to Guasti's argumentation is that the absence of A–chains from child Italian grammar should result in clitic realisation in base–generation positions, as already pointed out by a reviewer (1993/94:19, footnote 9). Guasti's response to this criticism is that Italian children are aware of the phonological properties of clitics, which force them to move, and hence clitics never appear where originally inserted. Moreover, it remains unclear why clitic production in infinitival contexts in early Italian is delayed as compared to finite contexts, given that clitic placement in infinitival contexts is assumed to involve a one–step A–movement similar to that in finite contexts. Guasti refers to the delayed production of clitics with infinitives (1993/94:20, footnote 12) and assumes that this is due to the fact that relevant infinitival contexts, namely those in which the infinitive is not governed by some matrix verb and the use of a post–verbal clitic is obligatory, are rather infrequent in child language. This results in a restricted number of contexts imposing the use of a post–verbal clitic, hence the low production rate.

Returning to clitic placement, Guasti reports that systematic errors of clitic placement were not attested in the database examined: when Italian children use clitics, their placement is adult–like (1–2) (Guasti 1993/94:14).

(1) Lo naccondi su.
It–CL hide–2S up
"(You) hide it up" (Martina, 1;8)

(2) Mi vieni prendere?
Me come–2S pick–Inf up
"Do (you) come (to) pick me up?" (Guglielmo, 2;3)

Schaeffer's (2000) study confirms Guasti's (1993/94) findings. In fact, Schaeffer's results are more robust in showing that clitics are omitted in early

[6] The claim advanced in Guasti (1993/94) is that Italian children optionally project functional categories, such as clitics, at the onset of L1A. She attributes this optionality to their incomplete mastery of the referential system associated with the relevant category.

Italian. Schaeffer studied clitic production in 35 Italian children, aged 2;1 to 5;11. Her methodology was a combination of a truth value judgement task with an elicited production task. She elicited constructions involving single and double clitics in the following contexts: present tense constructions, restructuring verb constructions and *passato prossimo* constructions (with and without agreement)[7]. Table 4.2 summarises Schaeffer's results.

Age (in years)	Overt clitics	Omitted clitics	Full NPs
2	.22 (22/99)	.64 (63/99)	.14 (14/99)
3	.62 (179/290)	.15 (43/290)	.23 (68/290)
4	.89 (237/265)	0.0 (0/265)	.11 (28/265)
5	.91 (227/250)	0.0 (0/250)	.09 (23/250)
adults	1.0 (439/439)	0.0 (0/439)	0.0 (0/439)

Table 4.2: Overall proportion of overt and omitted direct object clitics and production of full NPs (in obligatory clitic contexts) (Table 7 in Schaeffer 2000:76)

The most striking results are the significantly low proportion of obligatory clitics produced by 2–year–olds (22%) and the huge developmental leap from 2 to 3 years of age in which the proportion of obligatory clitics produced nearly trebles to 62%. An example of an elicited clause with an omitted clitic is offered in (3) (Schaeffer 2000:78). Schaeffer attributes this outcome to the optional marking of referentiality in early Italian grammar[8].

(3) Raja: Il coniglio lava il pupazzo!
The rabbit washes the puppet
"The rabbit is washing the puppet"
Child: No, pettina!
No combs.
"No, (she) is combing" (A 2;5)

[7] In adult Italian in root clauses clitics precede the finite verb, in *passato prossimo* they precede the auxiliary and in clitic climbing constructions they either precede the finite modal or follow the infinitive (Schaeffer 2000).

[8] In particular, Schaeffer claims that "if the non–overt *pro* object is not marked for referentiality, it does not move to SpecRefP and therefore cannot license the [referential] feature of the clitic. If the clitic's [referential] feature is not licensed, it cannot be spelled out" (2000:76).

Clitic omission in Italian 2–year–olds is attested in both Schaeffer's (2000) and Guasti's (1993/94) studies. On the basis of Schaeffer's results, even 3–year–olds are not adult–like with respect to clitic production, while 4– and 5–year–olds perform at ceiling. With respect to clitic placement, Guasti explicitly mentions that no systematic errors are attested in early Italian.

4.2.2. Romanian

Romanian resembles Italian and other finiteness–sensitive languages with respect to clitic placement: direct object clitics are pre–verbal, as in (4), except when combined with gerund and positive imperative forms, where they are post–verbal. However, the accusative 3rd person singular feminine clitic *o* ("her") exhibits an exceptional pattern of placement: in periphrastic constructions that utilise the auxiliary *avea* ("have") it surfaces post–verbally (5)[9] (Babyonyshev & Marin 2006:21).

(4) Elefantul l– / i– / le– a stropit
Elephant–the him–CL / them–CL.M / them–CL.F has sprinkled
(pe băiat / băieți / fete)
on boy / boys / girls
"The elephant sprinkled him (the boy/boys/girls)"

(5) Elefantul a stropit–o pe fată.
Elephant–the has sprinkled–her–CL on girl
"The elephant sprinkled the girl"

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[9] Marin (2004) attributes the exceptional behaviour of *o* to morpho–phonological requirements on clitic combinations. Avram (2000) attributes it to a coalition of factors and, building on evidence in Avram (1986), claims that one of them is phonological. Avram (1986) points out that the sandhi rule is optional when the masculine clitic precedes the lexical verb *avea*, whereas in the auxiliary uses of *avea* the use of the sandhi variant is obligatory. This divergence is exemplified in (1–2) (Avram & Coene 2007:13–14, footnote 8). On the basis of this observation, Avram (2000) suggests that the feminine clitic *o* cannot appear pre–verbally because it lacks a sandhi variant.

1. îl am / l –am
CL have
"I have it"

2. l –am vazut / *îl am vazut
CL have seen
"I have seen him"

Avram (1999) was the first to study the L1A of clitic objects in Romanian (Babyonyshev & Marin 2006, Tsakali 2006:147–148). She administered an elicitation experiment modeled after Schaeffer (2000) to 16 monolingual Romanian children aged 2 to 5, comprising 3 age groups. She reports an omission rate of 42% (15/25) for 2–year–olds (N=3), 25% (32/133) for 3–year–olds (N=8) and 10% (7/56) for 4–year–olds (N=5) and concludes that clitic omission in child Romanian is initially high and decreases with age. With regard to clitic placement, Avram (1999) does not report target–deviant occurrences, even with the clitic *o* (Petinou & Terzi 2002:17, footnote 13).

Avram and Coene (2007) studied the emergence of accusative direct object clitics (ADOCs) in Romanian on the basis of longitudinal data from 2 monolingual Romanian children, Bianca (1;05–2;10) and Antonio (1;09–3;05). They calculated clitic omission and clitic production rates against the number of identified obligatory clitic contexts and report early emergence of clitics in both corpora (at age 2;0 for Bianca and at age 1;9 for Antonio), clitic omissions at the onset of L1A and substitution errors. Children in Avram and Coene's study have 90% target–like clitic production by age 3 (Bianca at age 2;10 and Antonio at age 2;11). This outcome challenges Avram's (1999) claim that 3–year–olds omit clitics 25% of the time.

Contrastingly, Avram and Coene's (2007) results are supported by Babyonyshev and Marin's (2006) study. Babyonyshev and Marin administered an elicitation task for direct object clitics based on Schaeffer (2000) to 25 monolingual Romanian children, aged 2;0 to 3;10. The independent variables tested were tense [+/–PAST], gender [FEM/MASC] and type of direct object ([+DEF] DP/Proper Name); a sample experimental item is offered in (6) (Babyonyshev & Marin 2006:29). Gender is of special interest for us, given that, as mentioned above, the position of the feminine clitic differs depending on the tense of the clause.

(6) Experimenter: "Look what else I have here, a bad dinosaur and a snake and look, the snake is swallowed, he is in the dinosaur's mouth"

Ce i– a făcut dinozaurul la şarpe?
What him has done dinosaur–the to snake?
"What did the dinosaur do to the snake?"

Child (2;4): L– a– nghiţit.
Him–CL has swallowed
"S/he swallowed/ate him"

They report significantly higher production rates for direct object clitics in 3–year–olds (N=13) (93%, 361/387), while clitic production in the group of 2–year–olds (N=12) only reached 38% (94/193), with an object omission rate of 60%[10] (96/193), a figure much higher than the 42% reported in Avram (1999). In a follow–up study Babyonyshev and Marin (2006) administered an elicitation task for direct and indirect object clitics to 18 monolingual Romanian children aged 2;5 to 3;10. They report comparable production rates for 2– and 3–year–olds for both direct clitics (86% (76/88) for 2–year–olds and 86% (73/86) for 3–year–olds) and indirect clitics (82% (114/133) for 2–year–olds and 74% (101/122) for 3–year–olds).

In sum, the results reported for clitic L1A in early Romanian differ: Babyonyshev and Marin (2006) and Avram and Coene (2007) report adult–like clitic production by age 3, while Avram (1999) reports that even 3–year–olds omit clitics 25% of the time. Taking into account that Avram has tested only 16 children, while Babyonyshev and Marin's (2006) database comprises data from 43 children, the latter seems to be a safer basis for conclusions. Finally, the substitution errors reported in Avram and Coene (2007), as well as their indication that post–verbal clitics emerge prior to pre–verbal ones, are of crucial importance for the purposes of the current investigation: I return to them in Chapter 7.

[10] Babyonyshev and Marin (2006) attribute the instances of clitic omissions to production limitations, namely to the inability of very young children to produce clitic constructions of the required length.

4.2.3. Spanish / Catalan

Clitics in Spanish and Catalan manifest the pattern attested in other finiteness–sensitive languages: they precede the finite verb and follow the non–finite verb. Wexler, Gavarró and Torrrens (2004) have studied clitic production in early Catalan and Spanish aiming to highlight the correlation between clitic omission and participle agreement. Spanish and Catalan are two closely related languages that differ in that only the latter exhibits (optional) participle agreement with the preceding object. Wexler et al.'s (2004) proposal is that in languages with participial agreement like Catalan, object clitics need to enter a double checking relation with two functional projections: the Clitic Phrase (checking of a D(efiniteness) feature) and AgrOP (checking of an agreement feature). By adopting Wexler's (1998) UNIQUE CHECKING CONSTRAINT (UCC) according to which "the D–feature of a DP can only check against one functional category", they assume[11] that checking of more than one feature in clitic constructions is impossible in child language, and one of the functional categories is not projected, hence leading to optional clitic omission.

Wexler et al. (2004) administered an elicited production task modelled after Schaeffer (2000) to 31 Catalan and 28 Spanish children aged 1;10 to 5;1. An example set of the experimental material is offered in (7).

(7) Experimenter 1: Aquest matí el cuiner ha començat a preparar el dinar. Ha agafat el trencanous i les nous i mira què ha fet.
"This morning the cook started preparing lunch.
He took the nutcracker and the walnuts and look at what he did"
Experimenter 2: Ja sé què ha fet: s'ha menjat les nous.
"I know what he did: he ate the walnuts"
Experimenter 1: No! Digues–l'hi tu: Què ha fet el cuiner amb les nous?

[11] In fact, Wexler, Gavarró and Torrrens (2004) assume that the UCC acts in conjunction with the Minimise Violations constraint, which requires that the derivation violates as few grammatical properties as possible.

"No! You tell her: What did the cook do with the walnuts?"

Expected response: Les ha trencades.

"He broke them"

The results obtained showed the following three patterns:

1. Ceiling percentages of correct clitic placement in both language groups, in all syntactic contexts: children placed clitics before finite verbs and after infinitives. The authors take this to indicate children's sensitivity towards the finite/non–finite distinction, and the raising of the finite verb to T.

2. Significant differences between Catalan and Spanish children with regard to the rates of clitic omission in all age groups. Clitic production with [–PAST] verbs reached 22.6% in Catalan 2–year–olds, 68.2% in 3–year–olds and 95.7% in 4–year–olds; clitic/object omission reached 74.2%, 25%, and 4.2%, respectively, for the 3 age groups. Clitic production was at ceiling in Spanish children; a single instance of clitic omission was attested in the group of 3–year–olds. Clitic production with the verb in the present perfect occurred at a rate of 12.9% in Catalan 2–year–olds, 71.4% in 3–year–olds, and 85.1% in 4–year–olds[12]; the rates of clitic/object omission were 83.9%, 19%, and 6.4% respectively for the 3 age groups. The clitic production rate for Spanish 4–year–olds was 100%, 97.5% for 3–year–olds and 81.2% for 2–year–olds.

3. Spanish children from all age groups produced no non–target clitic forms. A few errors were attested in Catalan children: 3–year–olds produced 3 incorrect clitic forms in [–PAST] clauses, while in the present perfect clauses, errors in clitic form reached 100% for 2–year–olds, 76% for 3–year–olds and 11.4% for 4–year–olds. All the errors attested in early Catalan involved substitution of the feminine, plural form *les* with the masculine, singular (unmarked) form *l'*.

In sum, the outcome of Wexler, Gavarró and Torrrens' (2004) study is that the distribution of object clitics with respect to the verb in Catalan and Spanish is

[12] Catalan children did not produce agreement between the participle and the direct object clitic, but they produced the default masculine singular form for the participle (Wexler et al. 2004). In particular, 2–year–olds produced clauses with agreement in 23.8% of the relevant contexts and without in 76.1% of them; the rates for 3–year–olds were 10.7% and 89.3%, respectively, and for 4–year–olds 28.9% and 71.1%, respectively. Notably, no statistically significant difference was found between the clitic omission rate in children who produced participle agreement and those who did not.

adult–like from the earliest stages of L1A. As for clitic production, Spanish children are target–like by age 3, while Catalan 3–year–olds still omit clitic pronouns 19% of the time with a verb in the present perfect and 25% of the time with [–PAST] verbs.

4.2.4. Standard Modern Greek

Clitic production in early SMG has been studied by Marinis (2000), Stephany (1997) and Tsakali (2006) among others. SMG patterns like other finiteness–sensitive languages and exhibits pre–verbal clitic placement with finite verbs and post–verbal clitic placement with gerunds and imperatives[13].

Stephany (1997) built a corpus of spontaneous data, the Stephany Corpus, consisting of the recordings of 4 monolingual Greek children: Spiros, Janna, Mairi and Maria, available from the CHILDES database, on the basis of which she studied the acquisition of clitic pronouns. With respect to clitic production, she points out (1997:239) that at age 1;10 Spyros omits 3rd person neuter accusative singular *to* in 91% of obligatory contexts (N=34), as in (8), or uses a phonetic placeholder, while in imperatives he correctly uses *to* enclitically, as in (9). Mairi and Janna at age 2;4 and Maria at age 2;10 use proclitic object pronouns in more than 90% of obligatory contexts (Stephany 1997:239).

(8) Aniki Ula.
Open–3S Ulla–NOM
[Intended utterance: Na to aniksi i Ula]
M it–CL.ACC open–3S the Ulla–NOM
"Ulla shall open it" (Spiros, 1;10)

(9) Pa(r) to!
take–2S it–CL.ACC
"Take it!"

[13] I follow Mavrogiorgos (2009) in assuming that the imperative verb in SMG has an unvalued person feature in T.

With respect to clitic placement, Stephany notes that by age 1;10, Mairi, Janna and Spyros use accusative and genitive clitics enclitically, and proclitics occur only in the data from Mairi and Spyros. She takes this to indicate that enclitics are used productively before proclitics (1997:238). She also reports a few errors with clitic placement. In particular, 3 tokens of misplaced clitics occurred in Mairi's data at age 1;10 and in Mairi's and Maria's data at age 2;4, all of which involved an enclitic used with a non–imperative verb, as in (10) (Stephany 1997:272).

(10) Epese me.
Fell–3S me–CL.ACC (instead of: "mu–CL.GEN epese")
"I dropped it" (Mairi 2;4)

Marinis (2000) studied the emergence and placement of object clitics in SMG in single clitic, Clitic Doubling and Clitic Left Dislocation structures; here I report figures for the overall clitic production, irrespective of the construction type. His study is based on two longitudinal corpora, the Christofidou corpus, consisting of (69) weekly recordings of spontaneous data from a monolingual Greek child, Christos, from age 1;7 to 2;8, and the Stephany Corpus mentioned above, covering ages 1;9 to 2;9. The raw numbers of pre– and post–verbal clitics in the Stephany corpus and the Christofidou corpus are reported in tables 4.3 and 4.4 respectively.

Child	Age	MLU	Pre– / Post–Verbal		Total	Total	Rate of Clitic Omission
			(Marinis 2000)			(Tsakali 2006)	
Spiros	1;9	1.6	3	3	6	10	.195
Janna	1;11	1.4	1	5	6	10	.155
	2;5	2.4	46	4	50	50	.011
	2;9	2.8	37	0	37	–	–
Mairi	1;9	2.0	102	41	143	143	.056
	2;3	2.2	122	62	184	184	.048
	2;9	2.5	151	11	162	–	–
Maria	2;3	2.3	18	13	31	31	.059
	2;9	2.9	67	20	87	87	.006

Table 4.3: Clitic production in early SMG: the Stephany Corpus (based on table 4 in Marinis 2000:269 & table 14 in Tsakali 2006:152).

[Christos] Age / MLU		Pre– / Post–verbal		Total	[Maria] Age	Total	Rate of Clitic Omission
Christofidou Corpus (Marinis 2000)					Doukas Corpus (Tsakali 2006)		
1;7	1.2	0	0	0	–	–	–
1;8	1.1	0	0	0	–	–	–
1;9	1.1	0	0	0	–	–	–
1;10	1.3	0	0	0	–	–	–
1;11	1.4	0	1	1	–	–	–
2;0	2.0	0	0	0	2;0.24	6	.041
2;1	2.1	23	3	26	–	–	–
2;2	2.2	13	3	16	2;2.8	39	.025
2;3	2.2	22	5	27	2;3.18	46	.037
2;4	2.0	26	6	32	–	–	–
2;5	2.4	49	4	53	2;5.4	46	.020
2;6	2.6	79	2	81	2;5.24	36	0.0
2;7	2.6	134	6	140	2;7.1	37	0.0
2;8	2.9	181	14	195	2;8.27	35	0.0
		527	41	571		245	

Table 4.4: Clitic production in early SMG: the Christofidou Corpus (based on table 3 in Marinis 2000:267) and the Doukas Corpus (based on table 16 in Tsakali 2006:153/154).

The most relevant results from Marinis' study (2000) are summarised below.

1. A stage in which no clitics are present is found in Christos' data alone: no clitics are produced from age 1;7 to 1;10, while only one clitic is produced from age 1;11 to 2;0.
2. No correlation is attested between the early non–finite verb forms in SMG (realised with the suffix *–i*; see Varlokosta et al. 1998) and object/clitic omission[14].
3. Pre– and post–verbal clitics emerge simultaneously: pre–verbal clitics are used in the indicative (11) and subjunctive (2000:267) and post–verbal clitics follow the imperative verb (12) (2000:268). No gerunds are produced in the corpora examined.
4. No instances of clitic misplacement are attested.

[14] Marinis (2000) subsumes clitic omission under object omission and claims that object drop is attested in early SMG. However, these do not unequivocally constitute instances of clitic omission, with the exception of three cases (2000:270, footnote 33).

(11) To chalacie (target verb: chalase).
It–CL.ACC destroyed–3S
"S/he destroyed it" (Christos, 2;1.14)

(12) Pa (target verb: par(e)) to.
Take–2S it–CL.ACC
"Take it" (Spiros, 1;9.11 & Janna, 1;11.6)

Marinis (2000) argues, on the basis of the observations that (i) pre– and post–verbal clitics emerge simultaneously and (ii) clitic misplacement is not attested, that Greek children's clause structure is adult–like (at least with respect to the projections involved in clitic placement) and that it projects, at least, up to M(ood) (following Philippaki–Warburton 1998) or up to C (following Terzi 1999a). The unavailability of clitics in Christos' data does not falsify this claim, since within Marinis' argumentation it may reflect an incomplete lexicon or object omission[15] in general.

Tsakali (2006) investigated the rates of clitic production and omission in early SMG on the basis of naturalistic and experimental data. She examined the files of the 4 children from the Stephany Corpus and the Doukas Corpus, consisting of data from one monolingual Greek child, Maria, recorded monthly from age 2;0.24 to 2;8.27. The results of her analysis of the Stephany corpus and Doukas Corpus are reported in tables 4.3 and 4.4 respectively. Tsakali's outcome (2006) confirms Marinis' (2000) claim as to the low level of clitic/object omission[16] in early SMG.

Tsakali also performed an elicitation task with 25 monolingual Greek children aged 2;4 to 3;6 to test clitic production in obligatory contexts. She used a picture–based task modelled after Schaeffer (2000) in which children were prompted to produce constructions involving a single direct object clitic. A sample experimental item is offered in (13). The experiment aimed at eliciting 5

[15] The fact that object omission in early SMG does not correlate with the use of early non–finite verbal forms shows that the former is not the result of a non–adult–like phrasal marker (Marinis 2000:277).

[16] The only point of divergence between Marinis' (2000) and Tsakali's (2006) analysis of the Stephany corpus are the number of clitics reported for Spiros at age 1;9 and Janna at age 1;11. Marinis (2000) reports that each child produced 6 clitics, while Tsakali (2006) reports that each produced 10.

clitic constructions per child, hence 125 overall. Children produced 124 clitics, with only one child (aged 2;6) omitting a clitic on one occasion.

(13) Experimenter Question: Ti kani edho to agoraki sto koritsaki?
What is the boy doing here to the little girl?
Expected Answer: To (CL) filai.
(He) is kissing her.

On the basis of the three studies (Marinis 2000, Stephany 1997, Tsakali 2006) carried out on clitic L1A in SMG, it can be claimed that SMG–speaking children have good clitic production from age 2;2 onwards, with low rates of clitic omission, while their clitic placement is adult–like, with the exception of the 3 misplacement errors reported in Stephany (1997).

4.3. Second position clitic languages

Languages like Serbo–Croatian, a South–Slavic pro–drop language, adhere to second position (2P) restrictions with respect to clitic placement: clitic pronouns undergo obligatory cliticisation and appear raised in 2P. The reason why clitics never appear unraised in utterance–final position is that they cannot bear focus (Ilic & Ud Deen 2004).

Ilic and Ud Deen (2004) investigated clitic production and clitic placement in early Serbo–Croatian on the basis of naturalistic and experimental data from 3–year–old monolingual speakers of Serbo–Croatian. Naturalistic data were collected from Marija, Marko, and Ivan, while Marija, Ivan and Lana took part in an elicited production task; a sample test item is offered in (14). The results obtained from the analysis of naturalistic data are summarised in table 4.5 and the experimental results in table 4.6.

(14) 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?"

Child: Da ga (CL) poyede.

"To eat him up"

Tables 4.5 & 4.6: Clitic placement in child Serbo–Croatian (based on tables 5 and 6 respectively in Ilic & Ud Deen 2004)

Clitic pronouns	Raised	*Unraised	Total
Marko	32	2	34
Marija	76	0	76
Ivan	17	0	17

Table 4.5: Naturalistic data

Clitic pronouns	Raised	*Omitted	Target
Marija	33	2	35
Lana	35	0	35
Ivan	33	2	35

Table 4.6: Experimental Data

The results reported show high rates of clitic production in Serbo–Croatian children. Moreover, they appropriately raise clitic pronouns to the clause 2P from as early as 3 years of age. Only sparse instances of unraised clitics occurred in naturalistic data (2/127; the 2 erroneous productions occurred in Marko's data; see table 4.5), while the results of the experimental task show that whenever a clitic is produced, it appears in the raised position.

In sum, the study carried out by Ilic and Ud Deen (2004) shows that Serbo–Croatian children have high rates of clitic production and adult–like clitic placement by age 3[17]. The few instances of omitted or unraised clitics may indicate that they omit or leave clitics unraised at earlier stages of L1A; as of yet, no suitable data are available to test this hypothesis.

[17] Ilic and Ud Deen (2004) take this result to indicate that Serbo–Croatian children have learned the correlation between specificity and raising in lexical objects and object personal pronouns.

4.4. Clitic scrambling languages

In Dutch all direct objects which co–refer with an antecedent in the preceding discourse obligatorily scramble over a number of elements including negative particles and adverbs. Schaeffer (2000) investigated the distribution of direct objects, including clitic pronouns, in 49 Dutch children, whose age ranged between 2;4 and 6;10. I report the results for pronominal elements alone, since this is the relevant aspect of Schaeffer's study for our investigation. Schaeffer employed a task combining truth value judgement and elicited production and tested 3 different types of constructions, each involving one of the following elements (over which an object can be scrambled): low adverbs (manner), high adverbs (temporal, locative) and negation. The results obtained are summarised in table 4.7, showing the proportions of pronouns produced per age group.

Age (years)	Full objects	Demonstrative pronouns	Strong personal pronouns	Clitics
2	.52	.26	.06	.16
3	.15	.26	.01	.58
4	.07	.07	.0	.86

Table 4.7: Proportion of full objects, demonstrative pronouns, strong personal pronouns and clitics in Dutch clitic scenarios (Table 8 in Schaeffer 2000:80)

As shown in table 4.7, Dutch children never omit objects[18], even at age 2. However, Schaeffer reports low rates of scrambled personal (33%) and demonstrative pronouns (17%) in Dutch 2–year–olds. Considerable development towards adult–like performance is observed at age 3, when the production rates for scrambled personal and demonstrative pronouns reach 95% and 78% respectively. Note that Dutch adults always scramble personal and demonstrative pronouns.

What is relevant for the current thesis is that all personal pronominal objects that appear unscrambled in Schaeffer's study are full pronouns, not clitic pronouns. This indicates that clitic placement in early Dutch is adult–like (15)

[18] Schaeffer claims that the type of the verbs used in the elicitation experiment contributed to the low rates of object omission: all the verbs involved in the Dutch clitic scenarios were particle verbs, hence telic, which require an overt object (2000:81).

(Schaeffer 2000:83), irrespective of the low rates of clitic production[19] for the 2–and 3–year–olds.

(15) Bert gaat 'm niet kleuren, de kikker.
Bert goes CL not color–INF the frog
"Bert is not going to color him, the frog" (L 2;8)

4.5. Tobler–Mussafia languages

Cypriot Greek, European Portuguese and Galician are languages that adhere to the Tobler–Mussafia law; hence, clitic pronouns are banned from clause initial position. All these languages exhibit finite and non–finite enclisis and finite proclisis (see section 2.3.1 for a discussion on the relevant syntactic contexts for CG and 2.3.5 for the corresponding contexts in EP and Galician). This section focuses on studies investigating clitic production and/or comprehension in early CG, early EP and early Galician.

4.5.1 European Portuguese

European Portuguese is a Tobler–Mussafia language which exhibits both pre– and post–verbal clitics and resembles CG in many respects with regard to contexts that trigger the one or the other; see section 2.3.5 in chapter 2. The current section discusses a number of experimental studies conducted on clitic L1A in EP. The focus of the majority of these studies is clitic omission in early EP. Various aspects of the phenomenon are studied, including its relation to null objects, and its contingency on clitic type (reflexive, 1st & 2nd person clitics) and syntactic context (i.e. strong islands), while a proposal is put forward to accommodate the data. In recent work on clitic placement in early EP Lobo and Costa report instances of clitic misplacement. An overview of their work is also provided.

[19] Schaeffer (2000) attributes the low rates of produced clitics in Dutch children to the optional marking of referentiality in child language. Scrambling is not allowed with non–referential objects in Dutch, since discourse–relatedness is not established, and the movement (scrambling) of the element in discussion to SpecRefP/SpecDiscP is not motivated. When the pragmatic system develops, this optionality is no longer attested.

Costa and Lobo (2007a) investigated whether the correlation that holds for many clitic languages between clitic omission and participial agreement (Tsakali & Wexler 2004, Tsakali 2006) holds for EP as well, thus testing the applicability of Wexler's UCC in early EP. They modelled a production task after Schaeffer (2000), with a puppet commenting on an acted–out story, and elicited accusative 3rd person clitics in enclitic and proclitic environments. Strong islands were also included in the test in order to control for the difference between target–like null objects and target–deviant clitic omission: given the availability of null objects in adult EP, strong islands, in which null objects are ruled out, are a suitable context for disambiguating between object drop and clitic omission. An example item from the enclisis condition is offered in (16) (Costa & Lobo 2007a).

(16) Experimenter: Olha! Está aqui o Urso Pooh. Ele hoje encontrou o Tigre e achou que o Tigre estava muito despenteado... Ah! Ele tem uma escova! Olha para o que o Pooh fez ao Tigre.
"Look! Here's Pooh. Today, he met Tigger and he thought his hair was not nice…Ah! He has a comb! Look at what Pooh did to Tigger"
Puppet: Eu sei! Ele lavou o Tigre!
"I know! He washed Tigger!"
Experimenter: Não...não lavou nada. Diz–lhe lá o que o Pooh fez ao Tigre!
"No…he did not. Tell him what Pooh did to Tigger."
Expected response: penteou–(o)
"combed–(him)"

The test was administered to 21 monolingual speakers of EP from 2 age groups: 2– to 3–year–olds and 4–year–olds. High rates of null forms were attested in all contexts (simple clauses and strong islands) in both age groups: clitic production reached 10% for 2– to 3–year–olds and 13.9% for 4–year–olds. Clitic production within strong islands was at 2.3% for the former age group and at 0% for the latter. Costa and Lobo take the massive proportion of null complements in strong island contexts to indicate that these are instances of omitted clitics rather than null objects. They base their claim on the significantly higher DP production

in strong island contexts (as compared to simple declaratives) observed in both age groups, which shows some sensitivity to the special characteristics of these domains.

Clitic omission in early EP challenges the basic tenet of the UCC. However, Costa and Lobo (2007a) do not interpret these results as counter–evidence for the UCC. Instead, they assume that clitic omission in EP is of a different nature than clitic omission in other languages. For them, UCC is maturational in nature (cf. the correlation with the Root Infinitive stage). So, in languages in which omission is a result of the UCC, a developmental effect is attested: by age 3 children have adult–like production. In EP, on the other hand, 4–year–olds still omit clitics. Therefore, the UCC is argued not to be responsible for the EP data. For Costa and Lobo (2007a), clitics and null objects in EP compete to convey the same message, while the choice between the two is post–syntactic and discourse–conditioned.

Moreover, Costa and Lobo (2007a) attribute the rates of clitic omission in early EP to complexity factors. On the one hand, the availability of null objects in adult EP obliges the children to learn the contexts in which null objects are legitimate and the ones in which they are not. On the other, the realisation of both enclisis and proclisis in finite contexts (Duarte & Matos 2000) results in extra burden for children. Costa and Lobo (2007a) assume, following Reinhart (1999), that this complex clitic system forces young children to decide between multiple convergent derivations, which results in problems in production.

What is not clear from Costa and Lobo's (2007a) study is whether clitic placement is a relevant variable for determining rates of omission in early EP. The results reveal different rates of clitic production in enclisis and proclisis contexts: 7.3% and 12.8% respectively for 2– to 3–year–olds and 4.8% and 22.7% respectively for 4–year–olds. However, a definitive answer would require the results to be statistically validated. Finally, a further aspect of Costa and Lobo's results which they did not further investigate, but which is relevant for the purposes of our investigation, is that some of the few clitics attested in proclitic environments were realised post–verbally. This outcome confirms Duarte and

Matos' (2000) observation that there is a tendency for EP–speaking children to overuse enclisis.

Costa and Lobo (2009) looked at comprehension data in order to offer corroborative evidence for their claim that the absence of clitic pronouns in the early production of EP is the result of the overgeneralisation of target–like null object construction (2007a), rather than the result of target–deviant clitic omission. They adapted to Portuguese a truth value judgment task developed by Grüter (2006) and administered it to 20 EP–speaking children aged 3;2 to 5;0. Grüter's task aimed at assessing the comprehension of structures with a null argument in French and English children. The experimental material involved intransitive structures, structures with superfluous DPs, superfluous clitics, object clitics and null objects. All these constructions were tested in two contexts: in simple clauses and in strong islands. Costa and Lobo hypothesised that the EP children's ability to assign a transitive interpretation to a complement–less verb would constitute an indication that they have acquired the null object construction.

The results obtained showed that: (1) EP children master transitivity, since they reject superfluous arguments and their interpretation of intransitive structures is adult–like, (2) they interpret clitics in an adult–like way, (3) they accept null objects in simple clauses like adults do, but (4) they accept null objects within strong islands as well, unlike adults. Overall, children performed very similarly to adults (above 80% correct responses in all conditions) with the exception of the condition testing null objects in strong islands, in which children assigned transitive interpretations to complement–less verbs.

For Costa and Lobo (2009) these results are compatible with the assumption that clitic omission in early EP is due to the overgeneralisation of the null object construction: EP children are aware of the availability of this type of construction, yet, unlike adults, they overgeneralise it to contexts with strong islands as well. The reason for doing so is that they have not yet developed the more restrictive adult–like grammar, within which the distribution of null objects is constrained.

The symmetry between production and comprehension data in early EP, as revealed by the similar results reported in Costa and Lobo (2007a) and (2009), is

at odds with the asymmetry observed in early French, as reported in Grüter (2006). While French children omit accusative clitics, they reject the transitive interpretation for null object constructions (rejection rate: 85%). This divergence in the performance between EP and French children reveals that clitic omission does not seem to be a uniform phenomenon cross–linguistically (Costa & Lobo 2009).

The hypothesis developed by Costa and Lobo (2007a, 2009) that EP children overgeneralise the null object construction at the onset of L1A is fully justified on the basis of the evidence from two other studies reported in Costa et al. (2008). The first one conducted by Costa and Lobo (2007b) elicited reflexive (1st, 2nd and 3rd person singular) and non–reflexive (3rd person singular) accusative clitics. The second one carried out by Silva (2008) elicited non–reflexive 1st, 2nd and 3rd person singular dative clitics in two contexts: simple clauses (enclitic and proclitic contexts) and strong islands. Reflexive clitics, as well as 1st and 2nd person clitics, do not freely alternate with null objects, thus patterning with clitics in strong islands. The methodology of both studies was based on Schaeffer (2000). 24 EP–speaking children aged 3 to 4 participated in Costa and Lobo's (2007b) study and 11 in Silva's (2008) study.

The results obtained from both studies showed that EP children omit clitics in all construction types, even in contexts in which this is illegitimate in adult language, i.e. reflexive clitics and 1st and 2nd person clitics. This outcome confirms Costa and Lobo's (2007a, 2009) hypothesis that the null object construction is overgeneralised in early EP. Yet, some important asymmetries were detected between the different clitic subtypes. Costa and Lobo (2007b) report a significantly higher production of reflexive clitics (47.4%, 104/219), as compared to non–reflexive ones (13%, 13/100). Higher rates of omission were attested for 3rd person non–reflexive clitics as compared to 1st and 2nd person non–reflexives (Silva 2008). In enclitic contexts, clitic production was low for 1st and 2nd person clitics (31.8%, 7/22), while no 3rd person (0/22) clitics were produced. In proclitic contexts a few 1st (9.1%, 2/22) and 2nd person (31.8%, 7/22) clitics were produced, while no 3rd person (0/22) clitics were produced. The rates of production for non–reflexive dative clitics (8.8%, 35/396) (Silva 2008),

and for non–reflexive accusative clitics (13%, 13/100) (Costa & Lobo 2007b), are comparable. Finally, no difference in dative clitic production was attested in enclitic (10.6%, 14/132) versus proclitic (6.8%, 9/132) contexts (Silva 2008).

This outcome is indicative for the two hypotheses that are invoked to explain the pattern of clitic omission in EP: Wexler's (1998) UCC and Reinhart's (1999) post–syntactic complexity. Given that all clitic types tested are similar in terms of feature specification, UCC predicts similar omission rates in all conditions. Contrastingly, on the basis of Reinhart's theory of post–syntactic complexity, production rates are expected to differ depending on the clitic subtype. Recall that reflexive clitics and 1st and 2nd person clitics do not freely alternate with null objects. Thus, no multiple convergent derivations arise and post–syntactic choices are not imposed on children. As a result, the system's complexity is reduced, hence higher production rates are expected for 1st and 2nd person clitics as well as for reflexive clitics. The results obtained clearly favour the latter hypothesis, since considerably lower omission rates were attested for reflexive clitics as compared to non–reflexive ones (Costa & Lobo 2007b) as well as for 1st and 2nd person clitics as compared to 3rd person clitics (Silva 2008). Crucially, though, it seems that children have not yet reached the state of adult knowledge concerning the illegitimacy of null objects in these contexts.

Turning now to clitic placement in early EP, in a recent study Lobo and Costa (2012) report instances of clitic misplacement in EP children at 5 years of age. Recall that EP exhibits 3 patterns of clitic placement: proclisis, enclisis and mesoclisis[20]. Lobo and Costa (2012) elicited *se* clitics, a type of clitic less frequently omitted in early EP (cf. Costa & Lobo 2007b), in enclitic and proclitic contexts in 20 EP children aged 5 to 6. The following proclitic contexts were elicited: clauses with negative markers, negative subjects, quantified subjects, the adverb *já* ("already"), as well as embedded complement and adverbial clauses. Simple and coordinate clauses that constitute enclitic contexts were also elicited. The control group, which consisted of adult speakers of EP, produced 217/240 clitics in enclitic contexts all of which were placed post–verbally. In proclitic

[20] Cf. section 2.3.5 in Chapter 1 for a discussion on the syntactic contexts in which each pattern of clitic placement is manifested.

contexts the control group produced 465/480 pre–verbal clitics (88.8%). Children produced 167/240 post–verbal clitics in enclitic contexts and 362/480 in proclitic ones. Interestingly, pre–verbal clitic placement in proclisis contexts in children (25.8%) was much lower than in the adult group (88.8%), but also much lower than post–verbal placement (74.2%). Notably, some cases of double clitic production, with the clitic placed both pre– and post–verbally, were also attested, but only very rarely (0.4%, 3/720).

Closer examination of the results reveals that pre–verbal clitic placement in proclitic contexts varies depending on the syntactic environment. On the basis of the results obtained the following ranking with respect to the percentages of target–like responses (in parenthesis) emerges:

1. negatives (60.8%)
2. negated subjects (48%)
3. embedded complements (47.1%)
4. adverbial clauses (34.3%)
5. embedded adverbials (8.7%)
6. quantified subjects (6.2%).

Lobo and Costa (2012) conclude that only proclitic contexts are truly problematic for young children. They hypothesise that variation in the input may be a factor that can explain the delay in the acquisition of clitic placement in EP. However, they do not assume that child production is merely a reflex of a variable input. Instead, they take the one–way tendency to indicate that this output is constrained by grammatical factors as well.

4.5.2. Galician

Galician resembles CG and EP in terms of clitic placement. It is a Tobler–Mussafia language exhibiting post–verbal clitic placement in root clauses: bicou*no* (CL) (“(s/he) kissed him”), bica*lo* (CL) (“to kiss him”) (Grohmann et al. 2012) and pre–verbal clitic placement in wh–questions, negatives, and clauses headed by quantifiers or focused XPs, as well as in subordinate constructions (Uriagereka 1995).

Children residing in Galicia, in the northwest of Spain, are exposed to both Galician, a Tobler–Mussafia language, and Spanish, a finiteness–sensitive language. Grohmann et al. (2012) tested clitic placement in 12 Galician–speaking children aged 5 to 6 residing in the area of Pontevedra. They used the COST Action A33 tool adapted to Galician. However, they elicited simple declaratives rather than *because*–clauses, since most subordinate constructions, such as those used in the original A33 tool, trigger pre–verbal clitic placement in Galician. An example of the experimental material is offered in (17) (Grohmann et al. 2012). The elicited clause could involve either a finite or a non–finite verb.

(17) Neste debuxo temos un neno e un balón.
"In this picture, we have a boy and a ball"
O neno fixo algo.
"The boy did something"
Qué fixo o neno co balón?
"What did the boy do with the ball?"

Overall, 144 constructions were elicited, 131 of which involved a clitic pronoun (91%). Only 55 of the 131 elicited clitic constructions (42%) involved a finite verb, while the remaining 76 (58%) constituted infinitival constructions. Children's clitic placement was target–like 97% of the time, irrespective of the context, with only 4 misplacement errors out of the 131 responses.

This result is a clear indication that Galician–speaking children acquire adult grammar with respect to clitic placement by age 5. An earlier age of acquisition is not precluded, and this is an issue worth exploring. Likewise, it is worth exploring whether clitic misplacement is manifested in the course of Galician L1A. For this purpose, younger children should be tested and the experimental material should involve proclisis–triggering contexts as well.

4.5.3. Cypriot Greek

Petinou and Terzi (2002) were the first to study the acquisition of clitic pronouns in CG. They were also the first to observe and report the phenomenon of clitic misplacement. A second study carried out by Grohmann and colleagues (2011, 2012) studied clitic production and placement in CG–speaking children aged 3 to 5 and offered useful insights regarding the reflection of the sociolinguistic situation in Cyprus in language use.

Petinou and Terzi (2002) investigated the L1A of CG clitics on the basis of a corpus consisting of data from 5 typically developing (TD) children[21] and 5 children diagnosed with specific language impairment (SLI). The TD group was followed longitudinally and recorded bimonthly over a period of 4 months (at 32, 34, and 36 months), while the SLI group, whose age ranged between 48 and 60 months, was tested once; the two groups were matched for mean length of utterance in words (MLU_W), gender, and socioeconomic status. Petinou and Terzi calculated misplaced clitics out of children's overall clitic production in *na*–clauses and negatives; recall that both contexts require a pre–verbal clitic in adult grammar (cf. Chapter 2). Examples of clauses involving a misplaced clitic are offered in (18–19) (2002:8).

(18) (N)a kolisume ta Δ tetradhio mu.
M stick–1PL them–CL (on–the) notebook my
"(To) stick them on my notebook" (LK)
Adult Production: "Na ta kolisume sto tetradhio mu"

(19) Oi, en aresi mu.
No NEG please–3S me–CL
"No, I don't like (it)" (LK)
Adult Production: "Oi, en mu aresi"

[21] Petinou and Terzi (2002) call this group *children with normal language development (NLD)*. I use the term *typically developing children* for the same subset of the overall population.

The phenomenon of clitic misplacement was attested in both groups with clitics placed post–verbally. The relevant results are summarised in tables 4.8 and 4.9. Table 4.8 shows the proportion of clitic misplacement (PCM) and MLU_W in the children with SLI and table 4.9 gives the same information for the TD children.

Child	Age (in mo.)	MLUw	PCM[22]
LK	60	3.8	1.0 (33/33)
FI	48	2.7	1.0 (47/47)
GK	60	4.0	1.0 (20/20)
SK	48	2.4	1.0 (31/31)
EP	54	2.9	1.0 (16/16)

Table 4.8: Proportion of clitic misplacement in children with SLI (based on table 3 in Petinou & Terzi 2002:13).

Child	32 mo.		34 mo.		36 mo.	
	PCM	MLUw	PCM	MLUw	PCM	MLUw
OX	0.10 (3/30)	3.0	0.02 (1/52)	3.6	0.0 (0/61)	3.3
NA	0.66 (16/24)	2.8	0.28 (5/18)	3.1	0.12 (4/33)	3.3
AM	0.07 (2/26)	2.8	0.0 (0/17)	3.2	0.0 (0/34)	4.0
AI	0.21 (3/14)	2.4	0.14 (3/21)	3.0	0.05 (2/37)	3.4
AX	0.62 (20/32)	2.9	0.44 (13/29)	3.1	0.0 (0/38)	4.0

Table 4.9: Proportion of clitic misplacement in TD children (based on table 2 in Petinou & Terzi 2002:13).

Paired comparisons revealed significant differences regarding PCM in the TD group between 32 and 36 months, $t(8)=1.92$, $p<.05$. No significant differences were found between 32 and 34 months, $t(8)=0.74$, $p>.05$, or between 34 and 36 months, $t(8)=0.98$, $p>.05$. Finally, PCM was significantly larger (and invariant) in the group with SLI ($M=1.0$, $SD=.00$) when compared to the TD group ($M=0.31$, $SD=.29$), $t(8)=6.93$, $p<.05$.

In a follow–up test, the PCM and MLU_W of 3 additional TD children were measured, but no instances of clitic misplacement were attested; the relevant data appear in Table 4.10.

[22] The first number in parentheses refers to the number of misplaced clitics, and the second to the overall clitic production (misplaced and correctly placed) per child (Petinou & Terzi 2002:13).

Child	Age (in mo.)	MLU	PCM
AI	28	2.8	0.0 (0/4)
IP	28	3.0	0.0 (0/7)
OK	28	3.0	0.0 (0/11)

Table 4.10: Proportion of clitic misplacement in 3 younger TD children (based on table 4 in Petinou & Terzi 2002:15).

Petinou and Terzi (2002) interpret their results following proposals in Terzi (1999a). Specifically, they assume that finite enclisis in CG derives from proclisis with the manifestation of verb movement past the cliticisation site and that verb movement from T(ense) to M(ood) is an alternative mechanism employed to satisfy the strong verbal features of M: these features are satisfied by the inflectional particles heading MP, i.e. negators, modal particles. If no such particle heads the clitic clause, V–to–M obtains. Clitic misplacement is interpreted along these lines as the result of the overgeneralisation of verb movement to M. This behaviour is attributed to children's misanalysis of the X–bar status of the inflectional particles heading MP: while these particles in adult CG are heads (of MP) and thus able to satisfy the feature checking requirements of M, in child grammar they are perceived as phrasal specifiers (located in the SpecMP) or adjuncts, hence their inability to check the verbal features of M. As a result, V–to–M is manifested even in their presence and the following order derives: particle–verb–clitic.

Petinou and Terzi (2002) offer two pieces of evidence in support of this analysis. First, they take the *na* omissions in children with SLI[23] as evidence for problems with the M(ood) head. Second, they take some uses of the inappropriate negative marker by a single child with SLI to indicate the phrasal status of negative particles in early CG[24]. However, their claim is weakened by the fact that both pieces of evidence are found in SLI data alone. Petinou and Terzi mention that none of the TD children either omitted the modal particle *na* or made the

[23] The raw numbers and the relevant percentages of *na* omissions in total numbers of *na*–clauses involving clitic pronouns for the group with SLI are as follows: GK: 12% (4/33); LK: 15% (7/47); FI: 27% (8/30); EP: 6% (2/31) and SK: 28% (9/32) (Petinou &Terzi 2002:17).

[24] This child used constituent negation (*ohi*), which is phrasal, instead of sentential negation (*dhen* and *min*), which is considered an X (Petinou & Terzi 2002, and references therein); but, crucially, not vice versa. Petinou and Terzi (2002) take the nature and the direction of the substitution as evidence that the child has attributed phrasal status to all the negative particles and they extend their claim to the modal particle *na*.

wrong choice of negative particle; moreover, only 1 out of the 5 children with SLI used the inappropriate negative marker (2002:24).

A number of conclusions can be drawn on the basis of Petinou and Terzi's (2002) study. First, CG–speaking children seem to learn the basic grammatical properties of clitics quickly; no inflectional errors have been reported, not even for the SLI population. This constitutes corroborative evidence for Petinou and Terzi's claim that children have no problems with clitics *per se*. In the second place, a negative correlation seems to hold between MLU_W and PCM: PCM decreases as MLU_W increases. A third point is that the first set of data (TD children) points to a developmental path, with the age of 32 months (or younger) as the starting point, with (fewer or more instances of) clitic misplacement, and the age of 36 months as the end–point, with adult–like clitic placement. However, this outcome is not confirmed by the follow–up study, with 3 children as young as 28 months exhibiting target–like clitic placement. This result raises issues regarding the generalisability of the phenomenon, especially if the small number of participants is taken into account. Moreover, the results reported in table 4.9 vary with regard to children's performance at the age of 32 months: PCM ranges between 7% and 66%; in fact only 2 children (N.A. & A.X.) have relatively high PCM. At the subsequent two stages (34 and 36 months) PCM decreases rapidly for all the participants relative to their performance at the age of 32 months. The latter point raises issues regarding the robustness of the phenomenon observed. In the fourth place, there is a striking difference between TD and SLI children: only the latter group misplaces clitics across the board. Petinou and Terzi take this observation one step further and suggest that ceiling percentages of incorrect clitic placement across syntactic contexts constitutes a clinical marker for SLI in CG–speaking children. Finally, the proposal put forward by Petinou and Terzi relates the overgeneralisation of enclisis with the X–bar status of the inflectional particles. On the basis of such a proposal, clitic misplacement is expected to correlate with the omission or wrong use of the relevant particles, i.e. negative and modal particles, as well as any other particle heading MP. However, the evidence provided does not adequately justify this claim.

Let us now turn to the studies conducted by Grohmann (2011) and

colleagues (Grohmann et al. 2012) within COST Action A33[25] on CG clitics. Grohmann (2011) administered A33's clitics–in–islands test (adapted for CG) to 24 TD children aged 5 to 6 years, as well as to a group of 10 TD children aged 3 to 4 years. Grohmann et al. (2012) administered the same test to 117 TD children aged 2 to 7 years.

The test developed within COST Action A33 and used by Grohmann and colleagues (2011, 2012) is an elicited production task for 3rd person singular accusative object clitics within syntactic islands. An example of the experimental material used is offered in (20): after the introductory sentence followed by a question, children were confronted with an embedded *jati* ("because")–clause, which they were prompted to complete; the bracketed part indicates the target structure.

(20) I mama xtenizi ti gorua ʧe i korua en omorfi.
"Mommy is combing the girl and the girl is beautiful"
Jati i korua en omorfi?
"Why is the girl beautiful?"
I korua en omorfi ja̱ti i mam:a tis [*htenizi tin–CL*]
The girl is beautiful because mommy [*combs her*].

All the 8 adults in the control group of Grohmann's study (2011) produced exclusively post–verbal clitics. Grohmann takes this outcome to indicate that the target–like grammar for CG–speaking children requires the enclitic pattern. On the other hand, Leivada et al. (2010), quoted in Grohmann et al. (2012), report a mixed pattern of clitic placement in the adult control group with a preference for enclitic placement (76.6%). The results reported in Grohmann (2011) and Grohmann et al. (2012) are summarised in tables 4.11–4.13.

[25] COST Action A33 is a project aiming to investigate the linguistic performance of typically developing children at the age of 5 across Europe(an languages) with respect to five areas of grammar including clitic production.

Age group	N	Clitics	Omission	NP	No answer	Other
3;0–4;0 (N=10)	120	110 (.92)	2 (.02)	3 (.02)	0 (0.0)	5 (.04)
5;0–6;0 (N=24)	288	276 (.96)	2 (.01)	2 (.01)	1 (0.0)	7 (.02)

Table 4.11: Clitic production in TD children aged 3 to 6 years for clitics–in–islands test (Grohmann 2011: tables 1 & 2)

Clitic placement	3;0–4;0 (N=10)	5;0–6;0 (N=24)
Pre–verbal	0 (0.0)	137 (.496)
Post–verbal	110 (1.0)	139 (.503)
Overall	110 (1.0)	276 (1.0)

Table 4.12: Clitic placement in TD children aged 3 to 6 years for clitics–in–islands test (Grohmann 2011: tables 1 & 2)

Clitic	2;0–2;11	3;0–3;11	4;0–4;11	5;0–5;11	6;0–6;11	Adults
Overall	.986	.867	.885	.943	.873	1.0
Post–verbal	.90	.89	.88	.68	.47	1.0

Table 4.13: Clitic production and clitic placement for all age groups for clitics–in–islands test (Grohmann et al. 2012: table 3).

Grohmann (2011) and colleagues (2012) take the enclisis pattern manifested by children aged 2 to 4 (tables 4.12–4.13), which resembles the adult pattern, to indicate that CG–speaking children acquire adult–like clitic placement at around 3 years of age. They attribute the mixed pattern exhibited by 5– and 6–year–olds[26] to the fact that the CG grammar of these children gets "muddled" by the interference from SMG at school; recall that at age 5;6–6;0 children in Cyprus enter the school system, where SMG is the language of instruction. In sum, they interpret their results within the proposed (domain–specific) Socio–Syntax of Development Hypothesis that primarily concerns the domain of schooling.

Nevertheless, the study reported in Grohmann (2011) and Grohmann et al. (2012) raises some issues. In the first place, the objective of COST Action A33 was to test clitic production rather than clitic placement. The choice of clitic

[26] As mentioned by Grohmann (2011), the 24 children aged 5 to 6 who performed the clitics–in–islands test can be grouped as follows: (i) 10 children who use predominantly proclisis, (ii) 10 children who use predominantly enclisis and (iii) 4 children who use the two patterns.

constructions involving an embedded *jati*–clause in the clitics–in–islands test is perfectly suited for eliciting clitics from languages with high percentages of clitic drop, like European Portuguese. *Jati*–clauses, however, are not ideal to test clitic placement in CG. Pappas (2011) carried out a magnitude estimation analysis of acceptability for clitic constructions in CG and showed that, in subject–less causal clauses headed by *jati*, both enclisis and proclisis are equally acceptable. However, if a pre–verbal subject is realised, as in the experimental material in the clitics–in–islands test used by Grohmann and colleagues (2011, 2012), focus is of crucial importance for clitic placement. Pappas (2011) tests the effect of focus for pre–verbal subjects and reports the following. With contrastive focus, there is no preference between the proclitic/enclitic pattern; with information focus, on the other hand, proclisis is preferred; and when there is no emphasis on the DP, enclisis is strongly preferred[27]. Grohmann (2011) reports that the 8 adults of the control group produced only post–verbal clitics in *jati*–clauses, whereas Leivada et al. (2010, quoted in Grohmann et al. 2012) report a mixed pattern of clitic placement in the adult control group. The latter outcome confirms Pappas' (2011) results: the CG target–grammar allows for both enclisis and proclisis in *jati*–clauses; this is also independently reported by Chatzikyriakidis (2010, 2012).

Moreover, what is of crucial importance for an acquisition study is the grammaticality of a given structure. Since *jati*–clauses exhibit dialectal variation with regard to clitic placement (pre–verbal in SMG and (mainly) post–verbal in CG) both proclisis and enclisis are grammatical in some variety. Hence, the results reported by Grohmann and colleagues (2011, 2012) are relevant for issues pertaining to code–switching or to sociolinguistic parameters in linguistic environments such as that of Greek–speaking Cyprus, which Grohmann (2011) calls "bi–x". In relation to the former point, he mentions that extensive code–switching takes place (in situations that require formal and polite styles) by Greek Cypriots, who use (some form of) SMG or what Arvaniti (2010) calls Standard Cypriot. From an acquisitionist's perspective the most important outcome of the aforementioned study is that CG–speaking children as early as 2 years of age have

[27] Grohmann et al. (2012) acknowledge the possibility of a bias against post–verbal clitic placement in CG in subject initial declaratives.

adult–like clitic production, i.e. they do not omit clitics (Grohmann et al. 2012).

4.6. Interim conclusions

A number of conclusions can be drawn on the basis of the various studies of clitic L1A in a number of European languages.

With respect to clitic production, a divergence is observed in the performance of children acquiring different languages. In some languages, clitics are omitted, while in others they are produced from very early on. Children acquiring Cypriot Greek (Grohmann 2011, Grohmann et al. 2012), Spanish (Wexler, Gavarró & Torrrens 2004), Standard Modern Greek (Marinis 2000, Stephany 1997, Tsakali 2006), Serbo–Croatian (Ilic & Ud Deen 2004), and, according to Babyonyshev and Marin (2006) and Avram and Coene (2007), Romanian have adult–like clitic production by age 3. Clitics have been found to be problematic and omitted by children older than 3 in Catalan (Wexler, Gavarró & Torrrens 2004), European Portuguese (Costa & Lobo 2007a *et seq.*, Costa et al. 2008), Italian (Guasti 1993/4, Schaeffer 2000) and, according to Avram (1999), Romanian. Low clitic production is also reported for early Dutch (Schaeffer 2000).

Early clitic omission has been attributed to different factors. Costa and Lobo's (2007a) analysis of EP refers to complexity, following ideas in Reinhart (1999), while Guasti (1993/94) mentions difficulties in forming A–chains. According to Tsakali and Wexler (2003) and Wexler, Gavarró and Torrrens (2004), the UCC in early grammars results in clitic omission in languages with past participle agreement alone. Schaeffer attributes the low rates of produced clitics at the onset of L1A of Dutch to the optional marking of referentiality in child–Dutch.

Clitic placement in most early languages, including Catalan, Italian, Romanian, Spanish, SMG and Serbo–Croatian has been reported to be adult–like, with the interesting exceptions of CG (Petinou & Terzi 2002) and EP (Lobo & Costa 2012), in which clitic misplacement has been attested. This is an intriguing and understudied phenomenon, which deserves closer examination in order for its

nature to be fully understood. This is precisely the focus of the empirical section of the current thesis. The methodology implemented and the results obtained are outlined in the following two chapters respectively.

CHAPTER 5: METHODOLOGY

5.1. Introduction

The discussion in this chapter revolves around various methodological aspects of the two studies conducted to investigate clitic L1 acquisition in Cypriot Greek: a spontaneous speech study, and an elicited–production experiment. The research questions posed, the hypotheses sketched and the predictions made are outlined in the first section. The second and third sections present the profile of the participants, the method and the materials used, as well as the analysis conducted on both the naturalistic and the experimental data.

5.2. Hypotheses of the present study

The goal of the present study is twofold. On the one hand, it aims to explore clitic L1 acquisition in CG and to answer a number of research questions in relation to the developmental stages that CG–speaking children pass through until they reach the target grammar. On the other hand, it aims to investigate the theoretical implications of the developmental patterns attested and to accommodate the child data within a formal account of cliticisation in CG.

The results obtained by Petinou and Terzi (2002) for early CG, as well as those by Lobo and Costa (2012) for early EP, are taken as the starting point. In Petinou and Terzi's (2002) study, only 2 (out of 5) typically developing (TD) children had relatively high percentages of misplaced clitics, even at the earliest stage reported (2002:13, table 2), which raises several questions about the generalisability of the phenomenon attested across participants. The current study investigates the acquisition of object clitics in a systematic and thorough fashion with a large number of children.

The first set of research questions is addressed from a developmental perspective:

1. Is the phenomenon of clitic misplacement attested in early CG?
2. What is the age range of the children exhibiting clitic

misplacement?

3. Is it generalised across participants within the relevant age range?

4. If not, what proportion of the overall population exhibits the phenomenon?

Concerning the theoretical implications of the above questions, the following hypothesis is developed: if the phenomenon of clitic misplacement is generalised across all (or a large proportion of) the participants within a defined age range, it marks a distinct developmental stage in the course of L1 acquisition of typically developing CG–speaking children[1] (Hypothesis 1).

In the second place, what is of crucial importance is to establish whether the target–deviant pattern attested is part of child grammar. Hence, I next ask whether the children's production is characterised by real optionality (see Parodi & Tsimpli (2005) for a definition of *real* and *apparent* optionality in the context of L2 acquisition) or not:

5. Is clitic misplacement attested in both enclisis and proclisis contexts?

6. If it is only attested in either proclisis or enclisis contexts alone, does it occur in all the syntactic contexts exhibiting the relevant pattern?

I am assuming that the manifestation of real optionality in children's clitic placement will result in the arbitrary choice of either the pre– or the post–verbal position irrespective of the syntactic context. As a result, clitic misplacement will occur in both enclisis and proclisis contexts. On the other hand, the overgeneralisation of either the one or the other pattern will show that children are consistent, albeit non–adult–like, in their clitic (mis)placement. On the basis of the above considerations, the following hypothesis is developed: if clitic misplacement occurs in both enclisis and proclisis contexts in comparable percentages, it shows real optionality in children's clitic placement. The overgeneralisation of either the enclisis or the proclisis pattern in all clitic contexts provides evidence that child grammar is not characterised by real optionality

[1] Petinou and Terzi (2002) claim that across–the–board clitic misplacement is attested in SLI populations alone and, presumably, constitutes a clinical marker for language impairment(s). It would be, therefore, interesting to check whether across–the–board clitic misplacement is attested in typically–developing (TD) populations on the basis of a much larger database.

(Hypothesis 2).

If a systematic pattern is attested, the next step is to identify which aspect of child grammar appears to be defective. Following Marinis' (2000:259–260) views in assuming the Minimalist Program (Chomsky 1995, 1998) as well as the Syntax–Morphology Interface as defined in the framework of Distributed Morphology (Halle & Marantz 1993), the formal features of clitic pronouns can be checked prior to spell–out, while lexical items are inserted after spell–out. Within such a framework, clitic omission could potentially be attributed both to an impoverished lexicon and/or to an impoverished grammar (cf. Guasti 1993/94, Wexler et al. 2004 inter alia). Clitic misplacement, however, could only be attributed to an impoverished grammar. Moreover, it has been claimed that CG–speaking children have adult–like clitic production from as early as 2 years of age (see table 3 in Grohmann et al. 2012). This can be taken as evidence for the early construction of the relevant lexical items in the child's lexicon. Hence, children's target–deviant performance in clitic placement would unequivocally constitute evidence for a defective computational system.

Clitic placement, as shown in chapter 3, is directly related to the inflectional domain of the clause. What is therefore of crucial importance is to investigate whether clitic misplacement correlates with defective I. In many European languages the use of optional infinitives indicates that the IP is not fully specified. Varlokosta, Vainikka and Rohrbacher (1998) claim that the early non–finite verbal forms attested in early Greek correspond to the optional infinitives attested in other early languages. I adopt Varlokosta et al.'s (1998) proposal and I hypothesise that if the proportion of early non–finite verbal forms in constructions involving misplaced clitics is significantly higher than that of finite verbs, target–deviant clitic placement may correlate with a non–adult–like I(nflection) (Hypothesis 3). If, however, the proportion of finite verbs in these constructions is higher, no such correlation holds. The (non–)existence of a correlation between clitic misplacement and early non–finite forms would provide useful indications for the second set of research questions.

From a theoretical perspective this investigation aims at explaining the child data in the context of a formal account of clitic placement in CG. A number

of different proposals have been put forward over the past two decades to account for clitic placement in CG. Chapter 3 discussed purely syntactic accounts proposed by Agouraki (2001) and Terzi (1999a, 1999b), a purely prosodic account by Condoravdi and Kiparsky (2001) and interface accounts by Mavrogiorgos (2012) and Revithiadou (2006, 2008). Acquisition data constitute a good tool for testing the adequacy of these proposals. All the syntactic accounts assume that finite enclisis derives from proclisis. Thus, for enclisis to obtain, the manifestation of additional syntactic (movement) operations is required, namely V–to–C in Agouraki (2001) and V–to–M in Terzi (1999a, 1999b). On the basis of this account, a legitimate prediction is that proclisis, being the less demanding pattern derivationally, will emerge first in child grammar. The same prediction follows with respect to Condoravdi and Kiparsky's (2001) account but on different grounds. In their account, proclisis appears as the default pattern, while enclisis results from the application of Prosodic Inversion. Hence, proclisis is less demanding derivationally in the sense that it does not require the application of Prosodic Inversion.

In Mavrogiorgos' (2012) and Revithiadou's (2006, 2008) accounts, on the other hand, the derivation of proclisis and enclisis are two independent procedures. The former account suggests that, in proclisis, the syntactic features and the PF requirement of the F head are satisfied by a feature−congruent XP or X and clitics surface in a functional head immediately c−commanded by F, while in enclisis the verb moves to F to satisfy F's features and the PF requirement. Revithiadou (2006) assumes that syntax provides two equally well−formed structures with a pre− and a post−verbal clitic, respectively, and PF filters the syntactic output on the basis of prosodic constraints. Thus, in all the above accounts except those of Revithiadou's and Mavrogiorgos', proclisis is considered the default pattern, as the less demanding derivationally, while for enclisis to be manifested additional operations are required (verb movement or Prosodic Inversion). Consequently I take the claim that proclisis is the default pattern as Hypothesis 4 in this study.

The present study is based on corpora of spontaneous speech, both cross–sectional and longitudinal, as well as on experimental data, and assumes that not

only the larger number of participants but the different types of methodologies will also increase the reliability of the results obtained. The database built for the purposes of the current investigation consists of data from 58 children[2] overall.

5.3. Spontaneous data

The first study is based on a corpus of naturalistic data. Given that no corpora of early CG are available in databases accessible to the research community (e.g. CHILDES), the first step for the current investigation was the construction of a corpus of spontaneous speech.

5.3.1. Participants

Eight typically developing (TD) Greek–Cypriot children, 3 females and 4 males, whose age ranged between 2;3 and 3;4 years took part in this study, and one of them was also followed longitudinally. It should be noted that the original design of the study involved the building of longitudinal corpora for all the eight TD Greek–Cypriot children. However, the building of such a large corpus of longitudinal data ended up being much more time–consuming than originally estimated. So, I had to rethink what methodology would better serve the aims of the current investigation. Our firm view was that a larger pool of participants would increase the reliability of the results obtained. This was relevant for our study since one of the main research questions it aimed to answer was whether the phenomenon under investigation was manifested by a large proportion of the population in discussion. I also thought that the inclusion of both experimental and spontaneous data was of equal importance. So, I decided to collect cross–sectional data, both naturalistic and experimental. In addition, I decided to build a longitudinal corpus for a single child. The underlying rationale for this was the following: even though following longitudinally a single child comes with the usual limitations that case studies imply, it could still offer useful indications for the robustness and the duration of the phenomena under

[2] The children that participated in the spontaneous speech study are different from the children who performed the elicited production experiment.

investigation. The selection of the child who was followed longitudinally was not arbitrary: he was the youngest participant with ceiling percentages of misplaced clitic pronouns.

All the participants were monolingual speakers of CG[3], with a monolingual CG–speaking background and no history of cognitive deficits or language impairments. They were all residing in Limassol, Cyprus. They all belonged to middle–class households but no detailed socio–economic information was collected. The profiles of the participants of the spontaneous speech study and the longitudinal study are sketched in tables 5.1 and 5.2 respectively.

5.3.2. Method

Samples of spontaneous speech were collected for the corpus. In order to achieve the optimal level of interest and comfort for the participants in the study, the recordings took place at each child's home. The experimenter met the child's parents well in advance, so that they could introduce her to the children as a friend of theirs. A number of prompts, including picture books, wooden puzzles and stickers, were used by the experimenter for the elicitation of naturalistic data, with a focus on the elicitation of constructions involving object clitics. The child was audio–recorded while s/he interacted with the experimenter. The recordings were performed with a digital voice recorder, introduced to the children as the experimenter's mobile phone. In this way, the required proximity of the voice recorder to the interlocutors was maintained, which resulted in good quality recordings, while the distraction for the participant was kept at low levels. Each recording session lasted approximately an hour and each child was recorded once. The youngest participant of the study [S1] was followed longitudinally and recorded every 1–1.5 months over a period of six months.

Data transcription was performed in accordance to the CHAT conventions of the Child Language Data Exchange System (CHILDES), the largest database for

[3] All children born in Greek Cypriot families and brought up in Cyprus are exposed to two varieties of Modern Greek, namely CG and SMG (see Arvaniti 2010 and a host of references therein). Therefore, the term *monolingual* in the Cyprus linguistic context refers to children that were not exposed to any other language(s).

child language, as outlined in MacWhinney (2012a (electronic edition), 2000 (last printed edition)). To be precise, the data were transcribed following the standards set by mid–CHAT, as described in MacWhinney (2012a:20–21). These transcripts constituted the corpus of utterances for each child. A sample of the transcribed data is offered in (1).

(1) [Neokleous corpus: S5, 2;10]

@Begin
@Languages: cgr
@Participants: CHI S5 Child, EXP Theoni Investigator, MOT Mother, FAT Father
@ID: cgr|theoni|CHI|2;10.0||Target||Child||
@Date: 20–JAN–2010
*CHI: &ina epa(r)kara θu to .
*EXP: eparkares mu to ?
*EXP: pundo δiko mu ?
*CHI: eto δame (.) en tuto .
*EXP: u (.) estamatise (.) jati: ?
*CHI: jati elipθe i peδina tu <pale> [?] .
*EXP: e ti ena kamis kalo ?
*CHI: pai θiγa [/] θiγa .
*EXP: tora pu elipsen i pezina tu ti ena kamis ?
*CHI: o: pai θiγa [/] θiγa .
*EXP: pai siγa [/] siγa .
*CHI: ena vano k' ali peδi(na) jati elipθe .
*CHI: to(r)a ena [/] ena pai δinata .
*EXP: emena ti ena mu kamis tora pu elipse dz' emena ?
*CHI: eva(l)a θu te θena .
[…]
*EXP: ti na tis ka(m)umen tora tis mamas tus ?
*CHI: to [/] to(r)a ena etθetaθo .
*EXP: ti: ?
*CHI: to(r)a ena eteta θo ti .
*EXP: ena tin eksetasis ?
*EXP: ise jatros tipote ?
*CHI: ne .
*EXP: ne:, <ti tin kamnis> [/] ti tin kamnis ?
*CHI: ena va(l)o ti xame te na ete:taθo ti .
*EXP: (n)a ti valis xame dze (n)a tin eksetasis ?
*EXP: hm (.) ti eshi, xtipa i karδja tis ?
*CHI: ne .
*EXP: e simeni e(n) zondani (.) a ?
*EXP: tak [/] tak [/] tak xtipa i karδula tis (.) a ?
*CHI: to kefalin tiθ ?
*EXP: to kefalin tis en kala ?

*EXP: ma ti ena tis kamis ?
*CHI: ena va(l)o .
*CHI: poni <t' eva(l)a ti(s)> [/] t' evala ti(s) γlipi .
*EXP: ti tis evales ?
*CHI: eva(l)a ti(s) γlipi .
*FAT: γrapse tis farmaka [CHILD'S NAME] .
*CHI: a: [/] afu e(γ)lata ti(s) .
*FAT: γrapse (t)is farmaka na pkjasi .
*CHI: <(e)na felo k' alo> [/] ena felo k' ala xxx jati ena .
*CHI: e [/] e [/] e(n) θikoθi .
*CHI: ja [/] jati ena po(n)iθi pola .
*EXP: ti ena kamis tis arkuδas ?
*CHI: &ep ena te [/] te ena felo alo jati e [/] en ekθetaθa to akoma .
*CHI: jati ena po(n)iθi <pola> [>] .

It was essential to strictly adhere to the conventions of the CHAT transcription format in order for the CLAN (Computerized Language Analysis) commands to run successfully on these files. CLAN is a programme purpose–designed for the analysis of data transcribed in the CHAT format (MacWhinney 2012a). All the calculations reported in the current chapter were performed by CLAN. Tables 1 and 2 report the number of turns, utterances and words produced per recording session by the participants in the spontaneous speech study and the longitudinal study respectively. The three rightmost columns report the ratio of words per turn, utterances per turn and words per utterance. The Mean Length of Utterance in Words (MLUw) for the purposes of the current study is identified with the number of words per utterance. The MLUw rate is considered a very good way to measure children's linguistic development. The unit of linguistic analysis used for the calculation of the Mean Length of Utterance is, thus, the *word* rather than the *morpheme*. This issue is discussed in the following section.

Child/Age		Number			Ratio		
		Utterances	Turns	Words	Words/ Turns	Utterances/ Turns	Words/ Utterances
S1	2;4	464	464	1104	2.379	1.000	2.379
S2	2;9	462	400	1285	3.213	1.155	2.781
S3	2;9	440	392	1704	4.347	1.122	3.873
S4	2;10	732	629	2190	3.482	1.164	2.992
S5	2;10	469	461	1028	2.230	1.017	2.192
S6	2;11	503	437	1399	3.201	1.151	2.781
S7	3;4	440	396	1302	3.288	1.111	2.959
S8	3;4	828	644	3258	5.059	1.286	3.935

Table 5.1: Responses elicited in the spontaneous speech study.

Child/Age		Number			Ratio		
		Utterances	Turns	Words	Words/ Turns	Utterances/ Turns	Words/ Utterances
S1	2;4	464	464	1104	2.379	1.000	2.379
	2;5	422	409	886	2.166	1.032	2.100
	2;8	437	421	1159	2.753	1.038	2.652
	2;10	520	482	1338	2.776	1.079	2.573

Table 5.2: Responses elicited in the longitudinal study.

5.3.3. MLT analysis

The computation of the ratio of words to turns, utterances to turns and words to utterances was performed by the CLAN program, as part of the Mean Length of Turn (MLT) analysis, described in detail in the CHILDES manual (MacWhinney 2012b:45–47, 111–113). The following definition is adopted for the term *turn*: a sequence of utterances spoken by a single speaker. Following standard practice in the acquisition literature, I am using the ratio of words to utterances to assess the child's language development. The computation of MLUw is essential for the purposes of our investigation, as the chronological age is not always a reliable indicator for the developmental stage of young children in terms of language abilities.

The reason for calculating the mean length of utterance in words (MLUw) rather than the mean length of utterance in morphemes (MLU) is twofold. First, a

morpho–syntactic (MOR) lexicon[4] for CG has not yet been constructed. MLU rates correspond to the ratio of morphemes over utterances, and thus MLU depends on the correct morphemic analysis of words. The calculation of MLU in files transcribed in the CHAT format is performed by the MOR program. It is essential that the MOR and POST programs are used to construct a morphemic analysis of the language of the transcribed data on which the analysis is to be performed; this requires a good MOR grammar and a POST disambiguation database (MacWhinney 2012b:143–182). Since neither a MOR lexicon nor a POST database is available for CG, the automatic tagging of the corpora in question in terms of morphemes could not be performed. Secondly, the morphemic analysis takes the morpheme, which usually corresponds to a lexical or functional word, as the unit of analysis. However, defining *morphemes* across languages has been proven to be a controversial topic in the acquisition literature, especially in highly inflected languages such as Greek. Contrastingly, taking the *word* as the unit of linguistic analysis has the positive result that the respective computations are not theory–bound. Moreover, the computation of MLUw is expected to correlate with the MLU rates. MacWhinney (2012b:116) indicates that for English (Malakoff, Mayes, Schottenfeld & Howell 1999), Spanish (Aguado 1988) and Irish (Hickey 1991) a very strong correlation was found between MLU rates and MLUw rates (a correlation of 97% for English, of 99% for Spanish, and of 99% for Irish).

MLT calculations, as performed by the CLAN program, included all utterances and words produced by the child in a single file. Turns that involved unintelligible vocalisations transcribed as xxx were also counted as utterances and/or turns, but the unintelligible strings were excluded from word counts. MLT calculations also excluded material followed by [/], [//] and [///], as well as the xxx symbols from the word counts. Moreover, pairs of utterances that use the +, and +. continuation codes were counted as single utterances.

[4] MOR grammars exist for the following languages: Cantonese, Chinese, Danish, Dutch, English, French, German, Hebrew, Japanese, Italian and Spanish and are available in: http://childes.psy.cmu.edu/morgrams/.

5.3.4. Data analysis

Data analysis included only (a) fully intelligible, (b) multi–word, and (c) spontaneously used utterances (imitations and immediate self–repetitions were discarded), and investigated clitic pronoun production and placement in early CG.

The first stage of data analysis focused on clitic production. In order to evaluate and analyse children's performance in the employment of clitics, all the contexts requiring them in adult language had to be measured and analysed. The discussion on the L1 acquisition of European Portuguese (Costa & Lobo 2007a *et seq.*, Silva 2008) in chapter 4 has shown that it is not trivial to disambiguate between object drop and clitic omission in child data. Consider example (1), which constitutes an experimental question–answer pair taken from Costa and Lobo's (2007a) study.

(1) Experimenter: Diz–lhe lá o que o Pooh fez ao Tigre!
"Tell him what Pooh did to Tiger"
Expected response: Penteou–(o)
"combed–(him)"

The expected response is obviously one which involves a clitic pronoun. However, if the elicited response is *penteou*, what is unequivocally missing is the direct object, which could have either been a clitic pronoun or a full DP. Given that the referent (*Tigre*) has already been introduced into the discourse, the target response should involve a clitic pronoun and not a full DP whose usage would render the response pragmatically inappropriate. However, Costa and Lobo (2007a) report significantly higher DP production in strong island contexts where null objects are ruled out in adult language. This shows that children may use a full DP even in contexts where adults don't. In this case, we will get a grammatical, albeit pragmatically over–informative, utterance. In a similar fashion, as for utterances lacking an overt object, it is difficult to decide whether they constitute instances of object drop or clitic omission. Taking all the above into account, I consider all these cases as instances of object omission, without

disambiguating between clitic omission and object drop. The computations in the corpora examined were, hence, performed as follows: the absolute numbers and the relevant percentages of object realisation versus object omission were calculated and only cases that unequivocally involved a missing clitic pronoun, i.e. structures that required clitic doubling or CLLD, were identified as instances of clitic omission.

All the clitic constructions produced were then classified as proclisis– or enclisis–triggering contexts on the basis of adult language. Hence, contexts where an adult would produce a pre–verbal clitic were taken as proclisis contexts, while the ones in which an adult would produce a post–verbal clitic were taken as enclisis contexts. The absolute numbers and the respective percentages of clitic constructions produced per condition were calculated. The absolute numbers of clitics produced in different syntactic contexts falling within these two conditions were also counted. In particular, enclisis contexts involved root clauses and imperatives, while proclisis contexts involved negatives, clauses headed by the modality markers *na* and *enna*, wh–elements and other proclisis–triggering elements. The absolute numbers were then computed of Single Clitic (SC), Clitic Doubling (CD) and Clitic Left Dislocation (CLLD) structures produced.

The second stage of data analysis focused on clitic placement in enclisis and proclisis contexts. In the first place, the absolute numbers and the respective percentages of clauses in which clitic placement was target–like and target–deviant per condition were calculated. The next stage investigated clitic placement by syntactic context: on the one hand, root clauses and imperatives, and on the other, negatives, clauses headed by the modality markers *na* and *enna*, wh–elements and any other proclisis–triggers. The absolute numbers of clitics in adult–like and non–adult–like position were counted.

5.3.5. Clitic misplacement and finiteness

The final stage of data analysis investigated whether a correlation holds between clitic (mis)placement and finiteness in early CG. Clitic pronouns are taken to be inflectional elements and it has been assumed that their emergence is a result of a

fully–fledged IP. In the literature on L1A a correlation has been found to hold between clitic omission and the optional infinitive stage (Guasti 1993/94, Hamann et al. 1996, Haegeman 1996): it has been shown that, during this stage, clitic objects are omitted. Clitic production in early CG, according to Grohmann et al. (2012), is at ceiling from as early as 2 years of age. However, clitic misplacement has been attested (Petinou & Terzi 2002), a phenomenon absent from most European clitic languages.

An intriguing question is whether this target–deviant performance is the result of an impoverished I(nflection) in the early clause. It is, thus, of crucial importance to investigate the role of finiteness in the manifestation of clitic misplacement. The question is whether a correlation holds between (non–)adult–like clitic placement and a (non–)fully–fledged I in early CG. Such a correlation would strongly suggest that clitic misplacement is the result of an impoverished clause structure.

CG, like SMG, is a language with no infinitival forms. Varlokosta et al. (1998) proposed that the stage at which SMG–speaking children over–use perfective verbs with the suffix *–i* (Tsimpli 1992 inter alia)[5] corresponds to the root infinite stage in languages with infinitives[6]. The suffix *–i* in SMG and CG alike constitutes the 3rd person singular [–PAST] suffix, as well as the active participle. For Varlokosta et al. (1998) perfective *–i* forms in child Greek constitute *early non–finite forms*. They convincingly argue in favour of the non–finiteness of the *–i* forms on the basis of their distribution (i.e. overgeneralisation to non–3rd singular contexts), as well as their incompatibility with overt subjects (only rare occurrences attested) and finiteness[7,8]. The fact that the overuse of the*–i*

[5] This stage is characterised by the use of the *–i* form for over half of the occurrences of a verb, while a large proportion of these occurrences involve non–3rd singular contexts. Moreover, the use of non–*i* forms is relatively low and there is no evidence for the acquisition of tense or modals (Varlokosta et al.1998:197–198).

[6] See Hyams (2002) for a sound argumentation against Varlokosta, Vainikka and Rohrbacher's (1998) prefunctional grammar hypothesis for early Greek, namely the hypothesis that Greek–speaking children pass through a stage during which their grammar lacks functional categories.

[7] Verbal forms in *–i* do not emerge along with modals and verbs with productive tense and agreement morphology, while their use correlates with the absence of an overt subject; in the acquisition literature it is assumed that overt subjects are licensed by a functional projection (Varlokosta et al. 1998:198–199).

[8] Hyams (2002) argues that such a hypothesis is not empirically supported by acquisition data in the light of cross–linguistic findings of early morphosyntactic convergence on the target grammar.

form at the onset of L1A in child Greek is more prominent with the perfective stem than with the imperfective stem has been taken by Varlokosta et al. (1998) to indicate that the *–i* form attested in child Greek corresponds to the active participle[9] (which in adult Greek requires the perfective stem) rather than the 3rd singular suffix. Their proposal is based on the fact that in Greek both verbal stems, the perfective and the imperfective, may occur with the 3rd person *–i* suffix. If it was assumed, however, that the *–i* form attested in child Greek constitutes the finite 3rd singular form, the fact that the perfective stem is favoured over the imperfective stem in child speech would remain unaccounted for. The view that the early verbal forms in *–i* are identified with the participle is also supported by the non–finite properties of the participle in Greek, i.e. no agreement with the subject.

Varlokosta et al. (1998) exploit Rizzi's (1993/94) truncation theory and the notion of markedness to account for the emergence of *early non–finite forms* in child Greek. According to their markedness hierarchy, infinitives are the least marked verbal forms followed by participles followed by finite verbs; markedness, in their analysis, relates to syntactic complexity. They hypothesise that young children initially prefer the verbal form that allows them to use (or project) as little of the functional hierarchy as possible. A (child) structure truncated at the VP–level yields an infinitive, a structure truncated at the ASPP level yields a participle, and the projection to AGRS yields a finite verbal form. According to Varlokosta et al., children make use of the smallest tree that is compatible with a well–formed item of the verbal paradigm. Since Greek has no

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She, further, claims that Greek children show an early convergence on the adult target as well. She puts forward the following two arguments. First, the rates of correct agreement with 1st and 2nd person verbs and 3rd person imperfective verbs for all the children in the corpora examined by Varlokosta et al. (1998) are higher than predicted under the hypothesis that children lack functional projections. Second, the use of modal particles in these corpora is greater than predicted by the prefunctional grammar model. However, the high proportion of 3rd person perfective verbs occurring in non–3rd person contexts, on the one hand, and the considerable change in frequency of modals between children in Stage I and children in Stage II, on the other, seek for an explanation.

[9] Hyams (2002) rejects Varlokosta et al.'s proposal that the perfective *–i* form attested in child Greek is a participle on the basis of its interpretation. For Hyams, if the *–i* form was a participle it should have had a perfective, i.e. completive, meaning contrary to fact, since verbal forms in *–i* receive a modal interpretation. In particular, she argues that since children do not typically assign wrong aspectual or modal meanings to inflectional forms, showing an early convergence on the target form–meaning correlates, the mismatch between the modal meaning and participle form is a strong argument against analyzing the *–i* form as a participle.

infinitival forms, Greek–speaking children cannot have a functional structure truncated at the VP level. The least marked form that is available in Greek is the participle, hence the truncation at the ASPP level[10].

Following proposals in Varlokosta et al. (1998) for early SMG, I take the perfective verbal forms ending in *–i* to constitute early non–finite forms in early CG as well. The analysis conducted here aimed to investigate whether clitic misplacement in CG correlates with the use of these early non–finite forms. For the purposes of this analysis, the data from children exhibiting ceiling percentages of misplaced clitics was used, and all constructions involving a misplaced clitic pronoun found in their data were analysed. In line with Varlokosta et al.'s (1998) proposal, the verbal forms used in constructions with misplaced clitics were classified as finite or early non–finite. All the verbal forms in *–i* were classified as follows: the forms with the perfective stem as early non–finite and the forms with the imperfective stem as finite. All verbal forms overtly marked for any other feature, including [person] and [number], were also classified as finite.

It should be noted, though, that in (Cypriot) Greek, as well as Standard Modern Greek, some verbs lack a perfective stem, i.e. verbs like *ka(m)ni* ("do") for which the stem *ka(m)n–* has both perfective and imperfective uses. These verbs were excluded from the analysis; however, the raw number of such verbs that appear in structures involving misplaced clitics is reported. The absolute numbers and the respective proportions of finite and early non–finite verbs were computed with the aim of showing whether the use of early non–finite verbal forms correlates with target–deviant clitic placement.

[10] Hyams (2002) rejects Varlokosta et al.'s characterization of perfective forms in *–i* as participles and proposes an alternative that primarily aims to capture the modal interpretation of these structures. She assumes that under appropriate structural conditions certain temporal/aspectual features may license the MoodP and proposes that the perfective forms in *–i* in Greek is an instance of aspectually licensed mood; in particular, the perfective feature in the verb licenses the active MoodP under Attract. Such an analysis involves the interaction of the following projections: Tense, Aspect, and Mood, hence the rejection of Varkolosta et al.'s proposal that child structure is truncated in ASPP.

5.4. Elicited production experiment

Elicited production experiments allow the experimenter to construct a situation that requires the production of the target structure. On the basis of the results obtained from the spontaneous speech study, the aim of the experimental investigation was to elicit object clitics in specific types of constructions. A picture–based production experiment was designed and implemented for the purposes of the current study.

5.4.1. Participants

Fifty–one Greek Cypriot children were recruited from 5 nursery schools in Limassol, Cyprus, after approval from the directors and upon written parental consent. In a subsequent stage, one of the participants (S28) was removed from the data analysis, since he was unable to perform the task. Thus, ultimately, data from 50 children were analysed. The participants were divided into 3 age groups, namely Age group A=2;6–3;0, Age group B=3;1–3;6 and Age group C=3;7–4;0. Table 3 shows the age range (in years and in months), the mean age (in months) and the standard deviation (STDEV), as well as the number of children (N) included in each age group. The overall number of male and female participants is also reported in the table.

GROUP	AGE RANGE	N	MEAN AGE	STDEV	SEX
A	2;6 – 3;0 (30 – 36 mo.)	18	33.5	2.20	F: 12 / M: 6
B	3;1 – 3;6 (37 – 42 mo.)	22	39.7	1.91	F: 8 / M: 14
C	3;7 – 4;0 (43 – 48 mo.)	10	44.2	1.32	F: 6 / M: 4
Overall	2;6 – 4;0 (30 – 48 mo.)	50	38.4	4.48	F: 26 / M: 24

Table 5.3: Participants: elicited production experiment

5.4.2. Method

Each experimental session involved the implementation of a picture–based task, preceded by a warm–up session. The teacher introduced the experimenter to all the children in the classroom. The teacher then informed them the experimenter had some nice puzzles and books with which they could play for a while. Many children volunteered to perform the task and the ones who had parental permission were chosen. The testing took place in a quiet room in the respective nursery schools. Each participant was tested individually in a single session that lasted for approximately 20 minutes. The experimental sessions were audio–recorded, as were the spontaneous production sessions.

The puzzle task

A semi–structured elicitation task, the puzzle task, introduced by Eisenbeiss (2009), was used as a warm–up session. Two puzzles were used each consisting of a wooden board with slots for pieces, and the puzzle pieces that fitted in the slots. One of them had a number of jungle animals depicted on its pieces, and the other had the characters of the well–known cartoon "Dora the Explorer". The children were initially encouraged to familiarise themselves with the puzzles and they were then asked to guide the naïve experimenter to place the pieces in the corresponding slots. Throughout their interaction with the experimenter, there were many prompts for the use of clitic constructions, including both enclisis (2) and proclisis contexts (3).

(2) EXP: Ti na kamo ton elefanda?
What M do–1S the elephant–ACC
"What shall I do with the elephant?"
CHI: Var ton dhame. [Elicited Clause]
Put–2S him–CL.ACC here
"Put it here"

(3) EXP: Hori ti Dora dhame?
Fit–3S the Dora–ACC here

"Does Dora fit here?"

CHI: Oi, en ti hori. [Elicited Clause]
No, NEG her–CL.ACC fit–3S
"No, she doesn't fit"

The picture–based task

The picture–based task is an elicited production task for 3rd person singular object clitics. Seven pictures chosen from the book "First Hundred Words in English" (edited by Amery & Cartwright 2009) were matched with 8 questions related to the situation depicted on the corresponding picture. The pictures presented two–role transitive activities, e.g. the dog doing something to the girl, the boy doing something with his socks, etc. In particular, situations were selected in which only a specific sentence, the target construction, was felicitous.

The task was designed for the elicitation of two types of constructions: (1) root clauses and (2) clauses headed by the modal particle *na* and the future particle *enna*[11], within two conditions: enclisis and proclisis contexts. Root clauses constitute enclisis contexts, while clauses headed by modal particles constitute proclisis contexts. Four clauses per condition were elicited. The verbs that were chosen for the elicited constructions had to fulfil two requirements: they had to be part of the child's vocabulary and they had to be transitive. The following 4 verbs were selected: *thkjevazo* ("read"), *foro* ("wear"), *pkjano* ("take") and *valo* ("put"). The experimental questions for the elicitation of root clauses involved the verb *kamno* ("do") and the experimental questions for the elicitation of modality clauses involved the modal particles *enna* and *na* and the verb *kamno*. No particular attention was paid to the tense of the verb involved in the prompts. Mastropavlou, Petinou and Tsimpli (2014) have shown that typically developing (TD) CG–speaking children, as well as children diagnosed with SLI, were not affected by the verb tense in the production of object clitics.

Only 3rd person singular object clitics were elicited; see the forms in bold in table 5.4. I controlled for both genitive and accusative case and all the three

[11] Structures headed by particles *na* and *enna* are subsumed under the same category, as it is assumed that both particles are realised under CM; see the discussion in chapter 1 of this thesis.

genders to be represented in the task. A complete list of the experimental materials used can be found in Appendix I.

Number	Case	1st person	2nd person	3rd person		
				Masculine	Feminine	Neuter
Singular	Genitive	mu	su	**tu**	**tis**	**tu**
	Accusative	me	se	to(n)	**ti(n)**	**to**
Plural	Genitive	mas	sas	tus	tus	tus
	Accusative	mas	sas	tus	tes	ta

Table 5.4: The morphological paradigm of CG clitics

The testing procedure was simple; the children were shown the pictures one at a time. The experimenter would point at a picture (see sample picture below) and ask a question related to the situation depicted on it (4), in order to elicit a clitic construction (5). Notably, the antecedent of the elicited clitic pronoun was introduced by the experimenter, i.e. in the example material in (4–5) the DP *to kadhro* is the antecedent of the clitic *to*. This is essential given that only a D–linked definite object appears in a clitic form.

In the case of a non–answer, the question would be repeated once. If the child still gave no response, no further help would be provided and the experimenter would proceed to the next item. Over the duration of the experiment, the child was prompted to answer 2–3 filler questions that aimed to elicit constructions involving intransitive verbs. A pilot study was conducted with adult speakers of CG and two young children prior to the administration of the test to the participants of the experiment.

CONTENT REMOVED FOR COPYRIGHT REASONS

(4) EXP: Kita dhame tutin tin ikona. I mama krata mia sponda.
"Look at this picture. Mum is holding a nail."
Ti theli na kami to koritsaki to kadhro?
"What does the girl want to do with the frame?"

(5) CHI: Na to vali / kremasi (sto diho) .
M it–CL.ACC put hang–3S on_the wall–ACC
"To put / hang it on the wall" [Elicited Clause: *na*–clause]

Children's responses to the experimental questions were entered in answer sheets (see Appendix I). No responses and other answers (i.e. production of an interrogative or a root clause in a context that required a modal clause) were calculated but disregarded from further analysis. All the modal clauses produced after an experimental question aiming to elicit a modal clause and all the root clauses produced after a corresponding experimental question were categorized as target and non–target responses. Only structures involving a clitic pronoun were categorised as target responses. Non–target responses included errors of (clitic) omission, e.g. [*na kremasi*] instead of [*na to kremasi*], and the use of a full DP object instead of a clitic, e.g. [*na kremasi to kadhro*] instead of [*na to kremasi*]. Inflectional errors related to the features of the clitic, i.e. person, number, case and gender, were not taken into consideration for the inclusion of the elicited clause in the relevant category. To give an example, if the child produced a clause headed by a modal particle such as (7) as a response to the corresponding triggering question (6), the elicited clause would be categorised as *enna*–clause, irrespective of the inflection of the clitic pronoun; example (6–7) is a question–answer pair taken from one of the experimental sessions (participant P37). In the experimental question (6), a neuter definite object is involved, i.e. *tu moru* (the baby–GEN). However, the child arbitrarily assigns female gender to the baby in his response and uses a female clitic to refer to it (7). Irrespectively of the gender mismatch between the anteceded and the object clitic, the child utterance was categorised as *enna*–clause since it was produced in the appropriate triggering context.

(6) EXP: Ti enna kami o papas tu moru ?
What M do–3S the dad–NOM the baby–GEN
"What is dad going to do to the baby?" [Experimenter]

(7) CHI: Enna ti voithisi na vali ti fanelan tis.
M her–ACC help–3S M put–3S the t–shirt–ACC her–POSS
"He will help her to put on her t–shirt" [Elicited Clause]

Elicited clauses were then coded as correct and incorrect as follows: a clitic construction was coded as correct if the clitic was placed pre–verbally in a proclisis environment (*na/enna*–clause) or post–verbally in an enclisis environment (root clause), and incorrect if the clitic was placed post–verbally in a proclisis environment or pre–verbally in an enclisis environment. Finally, the absolute numbers and the respective percentages were calculated.

5.4.3. Double realisation of the clitic pronoun

An unexpected pattern attested in the spontaneous data of some of the children, the double realisation of the clitic pronoun in two positions: immediately preceding and immediately following the verbal host, required further scrutiny. Thus, it was deemed necessary to study whether this particular pattern occurred in the data of more children. In order to explore this issue, the entire recorded experimental session from a subset of the children that participated in the experimental investigation was transcribed and examined.

The first step was choosing one of the 5 nursery schools from which participants were recruited. The selection was based on two criteria. First, all the age groups had to be equally represented in the chosen group of participants, and, second, the representation of the two genders in the chosen group had to be balanced. At the chosen school, 11 children had been tested, 5 male and 6 female, whose age ranged from 2;8 to 3;9. All 3 age groups were represented: 3 children from age group A, 5 children from age group B and 3 children from age group C. Table 5 provides information about their age and the number of turns, words and utterances they produced per experimental session. The ratio of words to turns,

utterances to turns and words to utterances (MLUw)[12] are reported in the table. This subset represents one–fifth of the overall group of participants in the experiment.

Child	Age	Number			Ratio		
		Utterances	Turns	Words	Words/ Turn	Utterances/ Turn	Words/ Utterances
P6	2;8	347	341	757	2.220	1.018	2.182
P13	2;11	317	310	588	1.897	1.023	1.855
P18	3;0	200	195	407	2.087	1.026	2.035
P22	3;2	362	352	833	2.366	1.028	2.301
P26	3;2	151	146	486	3.329	1.034	3.219
P30	3;3	231	231	515	2.229	1.000	2.229
P35	3;5	126	113	462	4.088	1.115	3.667
P37	3;6	119	114	362	3.175	1.044	3.042
P44	3;7	148	142	496	3.493	1.042	3.351
P48	3;9	131	125	377	3.016	1.048	2.878
P50	3;9	74	73	197	2.699	1.014	2.662

Table 5.5: Subset of participants: elicited production experiment

The audio–recorded material for each of these children, comprising the implementation of both the puzzle task (warm–up session) and the elicited–production task, was transcribed according to the conventions of the mid–CHAT transcription format (MacWhinney 2012a); see section 5.3.2 of the current chapter. These transcripts constituted the corpus of utterances for each child and were examined in order to identify instances of double realisation of the clitic pronoun in two positions: pre– and post–verbally.

Having now introduced the methodology, the next chapter will present the results obtained.

[12] A detailed discussion for MLT calculations is given in section 5.3.3 of this chapter.

CHAPTER 6: RESULTS

6.1. Introduction

This chapter presents the results and analysis of the two studies conducted: the spontaneous speech study, involving both cross–sectional and longitudinal data, and the elicited production experiment. The results are presented in the form of tables and graphs, while the statistical analysis is reported following standard practice. The chapter is organised as follows: the first section presents clitic production and clitic placement in naturalistic data. The second section investigates the phenomenon of clitic misplacement on the basis of experimental data. The third section presents an unexpected phenomenon attested in the corpora examined, namely the double realisation of the clitic pronoun in both pre– and post–verbal position. The last section summarises the findings.

6.2. Spontaneous data

Two corpora of spontaneous speech, the first consisting of cross–sectional and the second consisting of longitudinal data were examined; see tables 5.1–5.2 in chapter 5 for more information about the corpora in question. The focus of the investigation was clitic placement and, in particular, the phenomenon of clitic misplacement attested in early CG (Petinou & Terzi 2002). Initial inspection of spontaneous production offered useful indications as to the nature, the generality and the robustness of the phenomenon. Further analysis of spontaneous data provided information about the use of simple and complex clitic constructions, with a focus on the production and placement of single clitics, as well as clitic clusters, in three types of constructions: Single Clitic (SC), Clitic Doubling (CD) and Clitic Left Dislocation (CLLD). The presence or absence of a correlation between the target–deviant clitic placement attested in a large group of children and the production of early non–finite forms was also investigated.

6.2.1. Clitic production and clitic placement

Tables 6.1–6.5 report the outcome of the first stage of data analysis on the first corpus consisting of cross–sectional data from 8 monolingual CG–speaking children. In these tables, as in all the tables in this chapter, the participants are identified by a serial number that appears in the first column. These serial numbers were assigned to the participants of both studies on the basis of their chronological age: a serial number starting with an "S" for the participants of the spontaneous speech study and with a "P" for the participants of the experimental study. The chronological age and the MLUw calculated by the CLAN tool for each participant (as described in section 5.3.3) are given in the second and third columns respectively.

The first stage of data analysis focused on clitic production and clitic placement. To evaluate and analyse children's performance in the employment of clitics, all the contexts requiring them in adult language were identified and analysed. The discussion in chapter 5 has shown that it is not trivial to disambiguate between object drop and clitic omission in child data, hence, the analysis in the current chapter does not disambiguate between the two. There are, however, cases where the missing complement is unequivocally a clitic pronoun, such as Clitic Doubling (CL) or Clitic Left Dislocated (CLLD) structures. These cases were identified and are reported in table 6.1. It should also be noted that some of the structures with a missing object produced by the children are grammatical in adult language, like the one in (1). These structures were disregarded from the analysis performed.

(1) *EXP: eshis kane(n)an arkuðakin pkjo oreo pu to ðiko mu pu enen oreo?
"Do you have a nicer teddy bear than mine which is not nice?"
*CHI: pa(o) na fero.
go–1S M bring–1S (S4, 2;10)
"I'm going to bring (one)"

Repetitions were also disregarded from the calculations provided that the exact form of the verb was repeated. To exemplify, consider examples (2) and (3). Example (2) involves two consecutive child utterances: while the first utterance involves a clitic, the second one lacks one. The use of the clitic pronoun in the first instance is an indication that the child is aware that a clitic pronoun should be provided; such cases may arguably constitute performance errors. Hence, for the purposes of the current analysis, the second child utterance in (2) was disregarded from data analysis. Example (3) involves two similar child utterances: the first one lacks a clitic, while the second involves one. However, the form of the verb in the two utterances differs: the first utterance involves the subjunctive form of the verb (*na valo*) while the second involves the past tense of the verb (*evala*). For the purposes of the current analysis the utterance lacking a clitic pronoun in (3) was calculated as an instance of object/clitic omission.

(2) *CHI: kame to
do–2S it–CL.ACC
*EXP: ti?
what
*CHI: kame.
do–2S (S5, 2;10)

(3) *CHI: (n)a valo?
M put–1S
*CHI: evala su.
put–1S you–CL.DAT (S2, 2;9)

Table 6.1 reports the raw numbers of overt and omitted objects/clitics and the respective percentages in parentheses. The percentages of clitic production were calculated by dividing the raw number of clitics produced by the raw number of clitic contexts identified in the respective corpora. And, the percentages of clitic/object omission were calculated by dividing the raw number of complement–less structures by the raw number of clitic contexts identified in the respective corpora. The cases that unequivocally involve a missing clitic

pronoun, such as clauses involving Clitic Doubling or Clitic Left Dislocation, are reported in square brackets.

Child	Age	MLUw	Clitic Production	Clitic/Object Omission
S1	2;4	2.38	69/74 (.93)	5/74 (.07) [1/5]
S2	2;9	2.78	69/82 (.84)	13/82 (.16) [6/13]
S3	2;9	3.87	110/116 (.95)	6/116 (.05) [1/6]
S4	2;10	2.99	134/156 (.86)	22/156 (.14) [2/22]
S5	2;10	2.19	68/75 (.91)	7/75 (.09) [1/7]
S6	2;11	2.78	120/131 (.92)	11/131 (.08) [2/11]
S7	3;4	2.96	63/68 (.93)	5/68 (.07) [3/5]
S8	3;4	3.93	279/296 (.94)	17/296 (.06) [6/17]

Table 6.1: Clitic production and clitic/object omission (Spontaneous data).

Examples of children's utterances involving an omitted clitic/object are given in (4–10). In examples (4–7), the experimenter asks a question aiming to elicit a clitic structure, given that the antecedent is already introduced. Yet, children's responses involve a verbal form alone with a missing clitic. In example (8), the child fails to use the standard expression *"kataferno ta"* ("I can make it") which obligatorily involves a clitic pronoun. The strong pronouns *tuto* and *kino* in examples (9) and (10) are clitic doubled in adult CG when used as direct or indirect objects. These children, however, failed to produce the adult–like structure and omitted the clitic. These cases unequivocally constitute instances of clitic omission.

(4) *EXP: ti enna tin kamis tin kamiloparðali pu kratas?
"What are you going to do with the giraffe you are holding?"
*CHI: epetatθa.
threw–1S (S4, 2;10)
Target structure: epetaksa tin.
threw–1S her–CL.ACC

(5) *EXP: ama su ðoko mja fanela (ti ena tin kamis)?
"If I give you a t–shirt (what are you going to do with it)?"
*CHI: (n)a foriso.
M wear–1S (S6, 2;11)
Target structure: (n)a tin foriso.
M her–CL.ACC wear–1S

(6) *EXP: ti na ka(m)ume ta nihja tu?
"What shall we do with his nails?"
*CHI: tipote (.) edze θa kotsume.
nothing NEG M cut–1PL (S2, 2;9)
Target structure: edze ena ta kopsume.
NEG M them–CL.ACC cut–1PL

(7) *EXP: ne (.) ala ti ena tu kami o kiniɣos?
"Yes, but what will the hunter do to him?"
*CHI: ena kami.
M do–3S (S5, 2;10)
Target structure: ena tu/ton (+verb)
M him–CL.DAT/ACC

(8) *EXP: (n)a se voiθiso?
"Shall I help you?"
*CHI: kataferno.
make–1S (S7, 3;4)
Target structure: kataferno ta.
make–1S them–CL.ACC
"I can make it"

(9) *CHI: na valo tuto.
M put–1S this–ACC
"I shall put this" (S6, 2;11)
Target structure: (n)a to valo tuto.
M it–CL.ACC put–1S this–ACC

(10) *CHI: ena pkjahjo kino.
M take–1S him–ACC

"I will take him" (S3, 2;9)

Target structure: ena ton pkjaso kino.
M him–CL.ACC take–1S him–ACC

S2[1] and S4 have the lowest rate of clitic production (84–86%). As for S2, almost half (46%) of the structures involving a missing complement identified in her corpus constitute cases of clitic omission (6/13). In the vast majority of the structures with an omitted clitic (5/6), the child does not clitic double the strong pronoun *dzinos*, as in (11). In a similar fashion, the accusative form of the first person singular strong pronoun *emena* in (12) is normally clitic doubled in adult language unlike in S2's utterance. S4 has the second lowest rate of clitic production (86%) but, unlike S2, only 9% of the structures with a missing complement identified in his database constitute cases of clitic omission (2/22).

(11) *CHI: θelo (n)a valo dzino dzame (s)to poi
want–1S M put–1S that–ACC over there to–the leg
mu.
my–POSS
"I want to put that over there on my leg" (S2, 2;9)

Target structure: θelo (n)a to valo dzino…
want–1S M it–CL.ACC put–1S that–ACC

(12) *CHI: jati e(n) ðexete n' akani emena?
why NEG agree–3S M bite–3S me–ACC

[1] It should be noted that S2 produced 3 complement–less clauses involving the verb *fkalo* ("take out"), which is a transitive verb in adult language. These structures, however, were not taken as instances of object/clitic omission because a closer inspection revealed that the verb *fkalo* ("come out") was used in her corpus in contexts which required the use of the verb *fkeno* ("take out"); corroborative evidence for this conclusion is provided by the fact that no form of the verb *fkeno* ("come out") was used by S2. An illustrative example of this weird syntax of *fkalo* is offered in (1).

(1) *EXP: ɣiris to (.) en pirazi.
"Turn it. It doesn't matter"
*CHI: e(n) (f)kali?
NEG take out–3S (S2, 2;9)
Intended structure: e(n) fkeni?
NEG come out–3S
"Doesn't it come out?"

"Why doesn't he agree to bite me?" (S2, 2;9)

Target structure:	jati	e(n)	ðexete	na	me	akani
	why	NEG	agree–3S	M	me–CL.ACC	bite–3S
	emena?					
	me–ACC					

Table 6.2 reports the absolute number of constructions involving single clitics (SC) and clitic clusters (CC) in enclisis and proclisis contexts. The proportion of the overall clitic production that arises in each type of context is given in parentheses. It can easily be seen from table 6.2 that a comparable number of enclisis and proclisis contexts are found in naturalistic child data. This indicates that the contexts requiring pre– and post–verbal clitics are approximately equally represented in child production, a crucial factor for the purposes of the current investigation.

Child	Age	MLUw	Enclisis Contexts		Proclisis Contexts		Overall	
			SC	CC	SC	CC	SC	CC
S1	2;4	2.38	26	9	33	1	59	10
			35 (.51)		34 (.49)		69 (1.0)	
S2	2;9	2.78	26	1	39	3	65	4
			27 (.39)		42 (.61)		69 (1.0)	
S3	2;9	3.87	49	2	49	10	98	12
			51 (.46)		59 (.54)		110 (1.0)	
S4	2;10	2.99	79	2	53	0	132	2
			81 (.60)		53 (.40)		134 (1.0)	
S5	2;10	2.19	31	3	30	4	64	4
			34 (.50)		34 (.50)		68 (1.0)	
S6	2;11	2.78	51	6	62	1	113	7
			57 (.47)		63 (.53)		120 (1.0)	
S7	3;4	2.96	27	4	29	3	56	7
			31 (.49)		32 (.51)		63 (1.0)	
S8	3;4	3.93	110	17	130	22	240	39
			127 (.46)		152 (.54)		279 (1.0)	

Table 6.2: Production of single clitics and clitic clusters in enclisis and proclisis contexts (Spontaneous data).

Table 6.3 reports clitic production in imperatives and root clauses, both requiring post–verbal clitic placement. The table presents the absolute number of

clitics produced per construction type, while the number in parentheses indicates the number of clitic clusters. Examples of children's production of root clauses and imperatives are given in (13) and (14) respectively.

(13) Oi, vali mu to i mama mu .
NEG put–3S me–CL.DAT it–CL.ACC the mum–NOM my–POSS
"No, my mum puts it for me" (S3, 2;9)

(14) Pe mu to tuto.
Tell–2S me–CL.DAT it–CL.ACC this–ACC
"Tell me this one" (S8, 3;4)

Child	Age	MLUw	Clitic Production		
			Imperatives	Root	Overall
S1	2;4	2.38	15 (6)	20 (3)	35 (9)
S2	2;9	2.78	2 (0)	25 (1)	27 (1)
S3	2;9	3.87	1 (0)	50 (2)	51 (2)
S4	2;10	2.99	33 (1)	48 (1)	81 (2)
S5	2;10	2.19	11 (3)	23 (0)	34 (3)
S6	2;11	2.78	10 (3)	47 (3)	57 (6)
S7	3;4	2.96	3 (2)	28 (2)	31 (4)
S8	3;4	3.93	60 (13)	67 (4)	127 (17)

Table 6.3: Clitic production in enclisis contexts: imperatives and root clauses (Spontaneous data).

The absolute numbers of clitic structures produced in proclisis contexts are reported in table 6.4. In particular, the number of clauses headed by the modality markers *na* and *enna* (M), negative particles (NEG) and wh–elements (WH) is reported in separate columns, while all the other contexts that require pre–verbal clitic placement, including clauses headed by focalized XPs, the factive complementizer *pu* and other particles, are subsumed under the category *Other*. The number of clitic clusters is given in parenthesis.

Child	Age	MLUw	Clitic Production				
			M	NEG	WH	Other	Overall
S1	2;4	2.38	30 (1)	2 (0)	0	2 (0)	34 (1)
S2	2;9	2.78	29 (2)	7 (1)	5 (0)	1 (0)	42 (3)
S3	2;9	3.87	52 (10)	4 (0)	0	3 (0)	59 (10)
S4	2;10	2.99	49 (0)	4 (0)	0	0	53 (0)
S5	2;10	2.19	21 (3)	12 (1)	1 (0)	0	34 (4)
S6	2;11	2.78	60 (1)	0	3 (0)	0	63 (1)
S7	3;4	2.96	25 (3)	5 (0)	1 (0)	1 (0)	32 (3)
S8	3;4	3.93	125 (19)	18 (3)	2 (0)	7 (0)	152 (22)

Table 6.4: Clitic production in proclisis contexts: clauses headed by modality markers and other proclisis–triggering elements[2], negatives and wh–questions (Spontaneous data).

Examples of children's production of negative clauses and clauses headed by *na* and *enna* are given in (15–16) and (17–18) respectively. The reason why clauses headed by the modal particle *na* and the future particle *enna* are subsumed under the same category for the purposes of data analysis is threefold. First, both construction types constitute proclisis contexts. Second, it is assumed, and has been adequately justified in chapter 1, that *na* and *enna* occupy the same functional head in the CG clause, namely CM (Roussou 2000). Third, in many cases it is difficult to identify which of the two forms is used in child data, given that *na* is often pronounced as [a], while *enna* is often substituted by its reduced form [na] or [a] (as in (17)). Moreover, in some cases the child would repeat an utterance with the particle *enna* using the reduced form [na] the second time.

(15) E(n) me afini o papa(s) tora.
NEG me–CL.ACC let–3S the dad–NOM now
"Dad doesn't let me now" (S2, 2;9)

(16) Papa [/] papa [/] papa [/] papa e(n) m' afini na pao
Dad NEG me–CL.ACC let–3S M go–1S
(s)ti &ia (θia) ti Lenja.
to–the aunt–ACC the Lenia–ACC

[2] The constructions subsumed under the category *Other* in the table above are headed by the following elements: for S1, [2 *pu*]; for S2, [focalized XP]; for S3, [1 *ama*, 2 *pu*]; for S7, [1 *pu*]; for S8, [4 *ama(n)*, 1 *an*, 1 *embu*, 1 *pu*].

"Dad, s/he doesn't let me go to aunt Lenia" (S5, 2;10)

(17) (Enn)a to valo eɣo dzame [/] tame.
M it–ACC put–1S I–NOM there
"I will put it there" (S2, 2;9)

(18) Enna tu(s) kedisi tuto(s) (o) po(r)tokalis.
M them–CL.ACC win–3S this–NOM the orange–NOM
"He will win them this one, the orange" (S3, 2;9)

Table 6.5 reports the absolute numbers of correctly placed and misplaced clitics in enclisis and proclisis contexts, while the respective proportions are given in parentheses.

Child	Age	Enclisis Context		Proclisis Context	
		COR	INCOR	COR	INCOR
S1	2;4	35/35 (1.0)	0/35 (0.0)	0/34 (0.0)	34/34 (1.0)
S2	2;9	27/27 (1.0)	0/27 (0.0)	38/42 (.90)	4/42 (.10)
S3	2;9	51/51 (1.0)	0/51 (0.0)	58/59 (.98)	1/59 (.02)
S4	2;10	81/81 (1.0)	0/81 (0.0)	1/53 (.02)	52/53 (.98)
S5	2;10	34/34 (1.0)	0/34 (0.0)	32/34 (.94)	2/34 (.06)
S6	2;11	57/57 (1.0)	0/57 (0.0)	1/63 (.02)	62/63 (.98)
S7	3;4	31/31 (1.0)	0/31 (0.0)	30/32 (.94)	2/32 (.06)
S8	3;4	127/127 (1.0)	0/127 (0.0)	146/152 (.96)	6/152 (.04)

Table 6.5: Correct and incorrect clitic placement in enclisis and proclisis contexts (Spontaneous data).

One conclusion easily drawn on the basis of the results reported in table 6.5 is that, in enclisis contexts, all the children performed in an adult–like way and placed the clitic post–verbally; not a single instance of clitic misplacement is attested. In proclisis contexts, on the other hand, a subset of the participants (S2, S3, S5, S7, S8) performed in an adult–like way, with correct performance levels ranging between 90% and 100%. However, the remaining participants (S1, S4 and S6) exhibited ceiling percentages of incorrect clitic placement, as they were producing post–verbal clitics at rates of 98% and 100%. This bimodal distribution of children's clitic production in proclisis contexts is illustrated in figure 6.1; the figures reported on the graph show the proportions of incorrect placement.

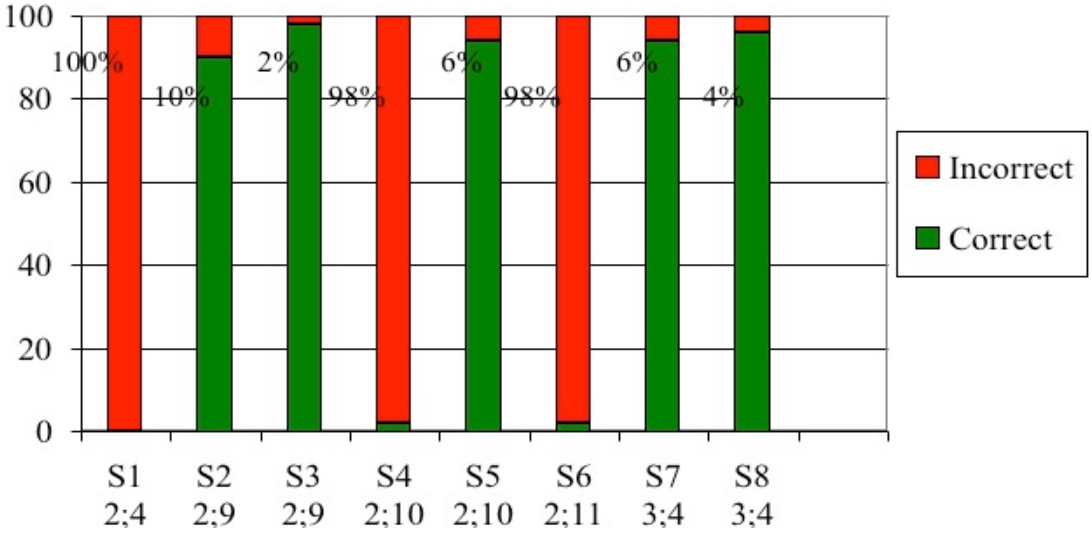

Figure 6.1: Clitic placement in proclisis contexts (Spontaneous data).

Tables 6.6–6.8 report clitic placement in different syntactic contexts. They report the absolute numbers and, in parentheses, the proportions of correctly placed and misplaced clitics. Table 6.6 presents the figures for imperative and root clauses, both requiring post–verbal clitic placement. Table 6.7 reports figures for clauses headed by the modality markers *na* and *enna* and the negative particles *dhen* and *men*, requiring pre–verbal clitic placement, and table 6.8 reports figures for clauses headed by wh–elements and other proclisis–triggers, also requiring pre–verbal clitic placement. It is worth remarking that children's performance with respect to clitic placement is similar irrespective of whether the construction involves a single clitic or a clitic cluster; hence, the number of clitic clusters is not reported separately.

Child	Age	Imperatives		Root Clauses	
		COR	INCOR	COR	INCOR
S1	2;4	15/15 (1.0)	0/15 (0.0)	20/20 (1.0)	0/20 (0.0)
S2	2;9	2/2 (1.0)	0/2 (0.0)	25/25 (1.0)	0/25 (0.0)
S3	2;9	1/1 (1.0)	0/1 (0.0)	50/50 (1.0)	0/50 (0.0)
S4	2.10	33/33 (1.0)	0/33 (0.0)	48/48 (1.0)	0/48 (0.0)
S5	2;10	11/11 (1.0)	0/11 (0.0)	23/23 (1.0)	0/23 (0.0)
S6	2;11	10/10 (1.0)	0/10 (0.0)	47/47 (1.0)	0/47 (0.0)
S7	3;4	3/3 (1.0)	0/3 (0.0)	28/28 (1.0)	0/28 (0.0)
S8	3;4	60/60 (1.0)	0/60 (0.0)	67/67 (1.0)	0/67 (0.0)

Table 6.6: Correct and incorrect clitic placement in enclisis contexts: imperatives and root clauses (Spontaneous data).

Child	Age	Modality Markers		Negatives	
		COR	INCOR	COR	INCOR
S1	2;4	0/30 (0.0)	30/30 (1.0)	0/2 (0.0)	2/2 (1.0)
S2	2;9	26/29 (.90)	3/29 (.10)	6/7 (.86)	1/7 (.14)
S3	2;9	52/52 (1.0)	0/52 (0.0)	4/4 (1.0)	0/4 (0.0)
S4	2.10	1/49 (.02)	48/49 (.98)	0/4 (0.0)	4/4 (1.0)
S5	2;10	20/21 (.95)	1/21 (.05)	11/12 (.92)	1/12 (.08)
S6	2;11	1/60 (.02)	59/60 (.98)	0	0
S7	3;4	23/25 (.92)	2/25 (.08)	5/5 (1.0)	0/5 (0.0)
S8	3;4	120/125 (.96)	5/125 (.04)	18/18 (1.0)	0/18 (0.0)

Table 6.7: Correct and incorrect clitic placement in proclisis contexts: negatives and clauses headed by modality markers (Spontaneous data).

Child	Age	Wh–questions		Other proclisis–triggers	
		COR	INCOR	COR	INCOR
S1	2;4	0	0	0/2 (0.0)	2/2 (1.0)
S2	2;9	5/5 (1.0)	0/5 (0.0)	1/1 (1.0)	0/1 (0.0)
S3	2;9	0	0	2/3 (.67)	1/3 (.33)
S4	2;10	0	0	0	0
S5	2;10	1/1 (1.0)	0 (0.0)	0	0
S6	2;11	0/3 (0.0)	3/3 (1.0)	0	0
S7	3;4	1/1 (1.0)	0 (0.0)	1/1 (1.0)	0/1 (0.0)
S8	3;4	2/2 (1.0)	0 (0.0)	6/7 (.86)	1/7 (.14)

Table 6.8: Correct and incorrect clitic placement in proclisis contexts: wh–questions and other proclisis–triggering elements[3] (Spontaneous Data).

Examples of children's production of misplaced clitics are given in (19–25). Negative clauses involving a dative and an accusative clitic are given in (19) and (20) respectively, while *enna*– and *na*–clauses involving a dative and an accusative clitic are given in (21) and (22) respectively. Clauses headed by the complementizer *pu* are given in (23–25).

(19) E(n) mila mu.
NEG talk–3S me–CL.DAT
"S/he doesn't talk to me" (S4, 2;10)

(20) En eplinamen to.

[3] The constructions subsumed under the category *Other* in the table above are headed by the following elements: for S1 [*pu* (2 correct)]; for S2, [focalised XP (correct)]; for S3, [*ama* (correct), *pu* (1 correct & 1 incorrect)]; for S7, [*pu* (correct)]; and for S8, [*an* (1), *aman* (4), *embu* (1) correct, *pu* (incorrect)].

NEG washed–1PL it–CL.ACC
"We didn't wash it" (S4, 2;10)

(21) <Ena ðitθo θu> [/] na ðitθo θu.
M show–1S you–CL.DAT
"I will show you" (S4, 2;10)

(22) E(n) mboro na (f)kalo to.
NEG can–1S M take out–1S it–CL.ACC
"I can't take it out" (S4, 2;10)

(23) Ke: [/] ke: e: [/] eklee kini i ɣineka
And was crying–3S that–NOM the lady–NOM
pu: e: [/] e(s)tavrohja(n) to(n) i kaki
COMP crucified–3PL him–CL.ACC the wicked–NOM
to hri(s)tuli k' eva(l)a(n) to(n).
the Christ–ACC.diminutive and put–3PL him–CL.ACC
"And that woman was crying that the wicked crucified the Christ and put him" (S3, 2;9)

(24) (N)a ði ta i mami pu
M see–3S them–CL.ACC the mummy–NOM COMP
feramen ta
brought–1PL them–CL.ACC
"(For) mummy to see them that we brought them" (S1, 2;4)

(25) Kafki tora pu apθa to.
Burns–3S now COMP lit–1S it–CL.ACC
"It burns now that I lit it" (S8, 3;4)

The youngest participant of the spontaneous speech study [S1] was followed longitudinally for a period of 6 months from age 2;4 to 2;10. S1 had good clitic production from age 2;4 but exhibited ceiling proportions of misplaced clitic pronouns in negatives, clauses headed by modality markers and other proclisis triggers. The aim of the longitudinal study was to investigate the robustness of the phenomenon of clitic misplacement in terms of magnitude and duration in the speech of S1. This participant was recorded 4 times and his data

were transcribed and analysed in the same way as the cross–linguistic data. Table 6.9 reports clitic production as well as clitic/object omission in S1's speech in contexts that require an overt clitic/object in adult CG.

Age	MLUw	Clitic Production	Clitic/Object Omission
2;4	2.38	69/74 (.93)	5/74 (.07) [1/5]
2;5	2.10	99/109 (.91)	10/109 (.09) [1/10]
2;8	2.65	76/83 (.92)	7/83 (.08) [0/7]
2;10	2.57	99/107 (.92)	8/107 (.08) [0/8]

Table 6.9: Clitic production and clitic/object omission (Longitudinal data).

Examples of S1's utterances involving an omitted clitic/object are given in (26–31). In examples (26) and (27), the experimenter asks a question aiming to elicit a clitic pronoun while the child's response involves a structure with an omitted clitic/object. In the second case, even though the correct form of the clitic pronoun is used in the experimenter's question, the child does not use it. In examples (28) and (29) the child freely utters two structures exhibiting object/clitic drop. The child utterances in (30) and (31) involve the strong pronouns *tuto* (*tutos, –i, –o*) and *ulo* (*ulos* or *olos, –i, –o*) respectively as direct objects. In adult CG, *tuto* and *ulo* in contexts such as the ones in (30) and (31) are normally clitic doubled, unlike in the child's productions.

(26) *EXP: ti na kanume ta molivakja, dze to svistiri, dze ti ksistra, hm?
pe mu ðinata dz' en akusa.
"What shall we do with the pencils, and the rubber, and the scraper, hm? Tell me louder, I couldn't hear you"
*CHI: (n)a valo mesa.
M put–1S in (S1, 2;5)
Target structure: (n)a ta valo mesa.
M them–CL.ACC put–1S in
"I shall put them in"

(27) *EXP: to psaliðaki pu e(n) spasmeno ti prepi na to kamume tora?
"The scissors that are broken, what shall we do with them?"
*CHI: fkjaksume.

fix–1PL (S1, 2;10)

Target structure: (n)a to fkjaksume.
M it–CL.ACC fix–1PL
"We should fix it"

(28) *CHI: oi (n)a svisis.
no M erase–2S (S1, 2;10)

Target structure: oi (n)a to svisis.
no M it–CL.ACC erase–2S
"You should not erase it"

(29) *CHI: eðo pu vazis.
here COMP put–2S (S1, 2;8)

Target structure: eðo pu to vazis.
here COMP it–CL.ACC put–2S
"Here you should put it"

(30) *CHI: efkjaksa mama tuto.
fixed–1S mum this–ACC (S1, 2;4)

Target structure: efkjaksa to mama tuto.
fixed–1S it–CL.ACC mum this–ACC
"I fixed that, mum"

(31) *CHI: ulo (.) θelo ulo.
all–ACC.MASC want–1S all–ACC. MASC (S1, 2;5)

Target structure: ulo (.) θelo to ulo.
all–ACC.MASC want–1S it–CL.ACC all
"All, I want it all"

Table 6.10 shows his clitic production in enclisis and proclisis contexts.

Age	MLUw	Enclisis Contexts	Proclisis Contexts	Overall
2;4	2.38	35 (.51)	34 (.49)	69 (1.0)
2;5	2.10	64 (.65)	35 (.35)	99 (1.0)
2;8	2.65	39 (.51)	37 (.49)	76 (1.0)
2;10	2.57	40 (.40)	59 (.60)	99 (1.0)

Table 6.10: Clitic production (Longitudinal data).

On the basis of the results reported, S1 has good clitic production in both types of contexts. His data resemble the cross–sectional data in exhibiting comparable percentages of enclisis and proclisis contexts.

S1, as already shown, has ceiling percentages of misplaced clitics in all proclisis contexts from his first recording at age 2;4. As revealed by the analysis conducted on his data, this non–adult–like pattern is manifested in his clitic production up to the age of 2;10. Table 6.11 reports his clitic production in different syntactic contexts. The leftmost columns report the number of clitics produced in imperatives and root clauses (enclisis contexts) and the rightmost columns report the number of clitics produced in negatives, wh–questions, *pu*–clauses and clauses headed by the modality markers *na* and *enna* (proclisis contexts). No figures for correct/incorrect clitic placement are given in the table, since all the clitics S1 produced were placed post–verbally in both enclisis and proclisis contexts, with only one exception discussed below. This applies to both single and double clitic constructions; the figures in parentheses show the absolute numbers of clitic clusters produced.

Age	MLUw	Enclisis Contexts		Proclisis Contexts			
		IMP	Root	M	NEG	WH	*PU*–clauses
2;4	2.38	15 (6)	20 (3)	30 (1)	2 (0)	0	2 (0)
		35 (9)		34 (1)			
2;5	2.10	25 (1)	39 (5)	33 (2)	2 (0)	0	0
		64 (5)		35 (3)			
2;8	2.65	6 (0)	33 (2)	21 (0)	9 (0)	5 (1)	2 (0)
		39 (2)		37 (1)			
2;10	2.57	8 (4)	32 (1)	53 (1)	3 (0)	2 (0)	1 (0)
		40 (5)		59 (0)			

Table 6.11: Clitic production in enclisis and proclisis contexts (Longitudinal data).

The figures reported in table 6.11 reveal that S1 has good production of root clauses and clauses headed by *na* and *enna*, while his production of negative clauses, *pu*–clauses and wh–questions is relatively low. S1 produced a few wh–questions[4], all of which involved a misplaced clitic. Examples involving an

[4] See section 1.4 in chapter 1 for a thorough discussion on wh–formation in CG.

argumental wh–question and a question headed by the quasi–argument *pu* are given in (33) and (32) respectively.

(32) *EXP: a: (.) kita (.) alon aɣrio zoon .
"Oh, look, another wild animal."
*EXP: ti en tuto ?
"What is this?"
*CHI: pu vazun to ?
where put–3PL it–CL.ACC
*EXP: vazun to: +/.
(They) put it…
*CHI: eðo !
here! (S1, 2;8)

(33) Pkjos etarakse mu to ?
who–NOM moved–3S me–CL.DAT it–CL.ACC
"Who moved it for me?" (S1, 2;8)

There is a single instance of correct clitic placement in a proclisis context, in S1's third file (age 2;8). This is a clause headed by the negator *men*[5] and it is cited in (34). However, this is an extract of a well–known folk song; the adult version (intended utterance) is cited below. Thus, it apparently does not constitute productive use of the clitic pronoun involved, but is part of a memorised unit.

(34) Palakalo sas ta kimata me(n) mu ksipnate .
Ask you the waves NEG me–CL.DAT wake–up–2PL
Parakalo sas kimata me mu tin (CL)–e–ksipnate. [Intended utterance]
"Waves, I'm asking you not to wake her up" (S1, 2;8)

The results obtained from the longitudinal study indicate that clitic placement in enclisis contexts is target–like, and, in a reversely analogous pattern,

[5] See section 1.2 in chapter 1 for a thorough discussion on the interaction of the negators *dhen* and *men* with the modal particles *na*, *tha*, *enna* and *as*.

clitic placement in proclisis contexts is target–deviant throughout the period studied. S1's consistency with regard to incorrect clitic placement for as long as 6 months is a strong indication of the systematic nature of the pattern attested, its magnitude and its potential duration. In sum, this outcome mirrors the robustness of the phenomenon in child grammar.

6.2.2. Clitic ordering within clitic clusters

Turning to clitic ordering within clitic clusters, the vast majority of the clauses produced adhere to the adult placement. Recall that the ordering of clitic pronouns within clusters in CG is strictly CL_{DAT}–CL_{ACC} (see section 2.3.3, chapter 2). No child produced a clitic cluster with the order CL_{ACC}–CL_{DAT} except for S1. S1 produced 27 double clitic constructions overall: 25 with the target–like order (CL_{DAT}–CL_{ACC}) and 2 with a target–deviant order (CL_{ACC}–CL_{DAT}). At age 2;4, he produced 10 constructions involving clitic clusters, 6 in imperatives, 3 in root clauses and 1 in a *na*–clause. Of these, all except one imperative clause, given in (35), adhere to the adult ordering. At age 2;6, he produced 8 clitic cluster constructions, 1 in an imperative clause, 5 in root clauses and 2 in *na*–clauses, all of which had correct ordering with the exception of one root clause repeated twice (36). At age 2;8, he produced 3 double clitic constructions, 1 in a wh–question and 2 in root clauses, and at age 2;10, 6 double clitic constructions, 1 in a root clause, 4 in imperatives and 1 in a *na*–clause, all with correct ordering.

(35) Anikse ta mu .
Open–3S them–CL.ACC me–CL.DAT
"Open them for me" (S1, 2;4)

(36) Espasen to mu .
Broke–3S it–CL.ACC me–CL.DAT
"S/he broke it for me" (S1, 2;6)

Two points can be raised with respect to (35). First, the verb involved in the clause in (35) appears on another 4 occasions in the same file (S1, 2;4) in the

same type of construction (the respective occurrences are cited below as (37–40)), in all of which the order is the correct one (CL_{DAT}–CL_{ACC}). Second, an identical clitic construction in terms of feature specification is found 14 lines after (35) and on the second occasion the clitics in the clitic cluster appear in the correct order (39).

(37) Anikse mu to.
(38) Anikse mu ti.
(39) Anikse mu ta.
(40) Anikse mu to.

These data show that the utterance in (35) does not constitute strong evidence that clitic ordering within child CG clusters is incorrect. It may be taken, together with (36), as an indication that clitic clusters in early CG may not always be target–like. However, no robust conclusions can be drawn on the basis of these sparse instances of incorrect ordering, since the vast majority of the clitic clusters produced adhere to the adult pattern.

6.2.3. Production of Clitic Doubling and Clitic Left Dislocation

The purpose of the analysis in this section is to investigate whether the participants in the study are able to produce more complex construction types involving clitic pronouns. Following Marinis (2000:272, footnote 34), the calculations reported below included clauses in which the clitic was doubled by either a full DP (D+NP), as in (41), or a strong pronoun, as in (42). The absolute numbers of the relevant structures (single clitic (SC), CD and CLLD) produced are summarised in table 6.12. Table 6.13 reports the absolute numbers of full DPs and strong pronouns produced in CL and CLLD constructions, while tables 6.14 and 6.15 present the different syntactic structures that appear in CD and CLLD respectively.

(41) (N)a to rotiso ton papa mu an ehi pilo.
M it–CL.ACC ask–1S the dad–ACC my–POSS if has–3S concrete
"I should ask my dad whether he has concrete" (S8, 3;4)

(42) Ehu(m)e to ke mi(s) (s)piti ma(s) (e)kino .
Have–1PL it–CL.ACC and us–NOM home–ACC us–POSS that–ACC
"We have it, us too, at home that one" (S3, 2;9)

Child	Age	Clitic Production			
		SC	CD	CLLD	Overall
S1	2;4	57 (.83)	6 (.09)	6 (.09)	69 (1.0)
S2	2;9	63 (.91)	3 (.04)	3 (.04)	69 (1.0)
S3	2;9	84 (.76)	26 (.24)	0	110 (1.0)
S4	2;10	123 (.92)	11 (.08)	0	134 (1.0)
S5	2;10	62 (.91)	6 (.09)	0	68 (1.0)
S6	2;11	89 (.74)	23 (.19)	8 (.07)	120 (1.0)
S7	3;4	52 (.82)	8 (.13)	3 (.05)	63 (1.0)
S8	3;4	250 (.90)	27 (.10)	2 (.01)	279 (1.0)

Table 6.12: Production of Single Clitic (SC), Clitic Doubling (CD) and Clitic Left Dislocation (CLLD) (Spontaneous data).

Child	Age	Clitic Doubling		CLLD	
		Pronoun	DP	Pronoun	DP
S1	2;4	6/6	0/6	4/6	2/6
S2	2;9	3/3	0/3	2/3	1/3
S3	2;9	9/26	17/26	0	0
S4	2;10	6/11	5/11	0	0
S5	2;10	4/6	2/6	0	0
S6	2;11	22/23	1/23	5/8	3/8
S7	3;4	4/8	4/8	3/3	0/3
S8	3;4	11/27	16/27	0/2	2/2

Table 6.13: Production of strong pronouns and DPs in Clitic Doubling (CD) and Clitic Left Dislocation (CLLD) (Spontaneous data).

Child	Age	Clitic Doubling				
		IMP	Root	M	Neg	Other
S1	2;4	2/6	1/6	2/6	1/6	0/6
S2	2;9	1/3	0/3	1/3	1/3	0/3
S3	2;9	0/26	11/26	13/26	1/26	1/26 (*pu*–clause)
S4	2;10	1/11	5/11	5/11	0/11	0/11
S5	2;10	1/6	4/6	0/6	1/6	0/6

S6	2;11	1/23	5/23	16/23	0/23	1/23 (wh–question)
S7	3;4	1/8	2/8	5/8	0/8	0
S8	3;4	7/27	4/27	10/27	5/27	1/27 (*aman*–clause)

Table 6.14: Production of Clitic Doubling (CD) per syntactic context (Spontaneous data).

Child	Age	Clitic Left Dislocation			
		IMP	Root	M	Neg
S1	2;4	1/6	4/6	1/6	0/6
S2	2;9	0/3	1/3	0/3	2/3
S6	2;11	0/8	6/8	2/8	0/8
S7	3;4	0/3	3/3	0/3	0/3
S8	3;4	0/3	2/3	0/3	0/3

Table 6.15: Production of Clitic Left Dislocation (CLLD) per syntactic context (Spontaneous data).

The same calculations were performed on the longitudinal data (6.16–6.18). The purpose of this analysis is twofold. Firstly, it aims to investigate whether more complex constructions, such as CD and CLLD clauses, emerge later than less complex ones. Secondly, it aims to offer some characterisation of the emergence of CD as compared to CLLD structures, taking into account the debate in the literature regarding their underlying nature (cf. the Uniformity Hypothesis of Sportiche (1992) and arguments against it in Anagnostopoulou (1994)).

Age	Clitic Production			
	SC	CD	CLLD	Overall
2;4	57 (.83)	6 (.09)	6 (.09)	69 (1.0)
2;5	94 (.95)	4 (.04)	1 (.01)	99 (1.0)
2;8	70 (.92)	6 (.08)	0	76 (1.0)
2;10	92 (.93)	7 (.07)	0	99 (1.0)

Table 6.16: Production of Single Clitic (SC), Clitic Doubling (CD) and Clitic Left Dislocation (CLLD) (Longitudinal data).

Age	Clitic Doubling		CLLD	
	Pronoun	DP	Pronoun	DP
2;4	6/6	0/6	4/6	2/6
2;5	3/4	1/4	1/1	0/1
2;8	4/6	2/6	0	0
2;10	5/7	2/7	0	0

Table 6.17: Production of strong pronouns and DPs in Clitic Doubling (CD) and Clitic Left Dislocation (CLLD) (Longitudinal data).

Age	Clitic Doubling				
	IMP	Root	M	Neg	*Pu*–clause
2;4	2/6	1/6	2/6	1/6	0/6
2;5	1/4	1/4	1/4	1/4	0/4
2;8	0/6	1/6	2/6	0/6	3/6
2;10	1/7	4/7	2/7	0/7	0/7

Table 6.18: Production of Clitic Doubling (CD) per syntactic context (Longitudinal data).

Age	Clitic Left Dislocation			
	IMP	Root	M	Neg
2;4	1/6	4/6	1/6	0/6
2;5	0/1	1/1	0/1	0/1

Table 6.19: Production of Clitic Left Dislocation (CLLD) per syntactic context (Longitudinal data).

The results show that CG–speaking children have a good command of CD from as early as 2;4. Moreover, while SC and CD structures are available and productively used by all the participants of the study, CLLDs are not attested in all the corpora examined.

6.2.4. Clitic misplacement and finiteness

As mentioned in the previous chapter, what is crucial for our study is to investigate whether the (mis)placement of clitic pronouns in early CG correlates with finiteness. For the purposes of the current analysis the corpora of the 3 children who exhibited clitic misplacement across the board (S1, S4 and S6; see table 6.5 and figure 6.1) were examined and all the constructions involving a misplaced clitic pronoun were identified. Following proposals in Varlokosta et al. (1998) for early SMG, I take the perfective verbal forms with the suffix *–i* to constitute early non–finite forms in early CG. Data analysis was performed as follows: all the verbal forms in *–i* with the perfective stem were classified as non–finite forms and all the other verbal forms (including imperfective forms with the

suffix *–i* as well as verbal forms overtly marked for the [person] or the [number] feature) were classified as finite[6]. As for the verbs that lack a perfective stem and appeared in structures involving misplaced clitics, they were calculated but excluded from further analysis.

Overall only 4 verbs lacking a perfective stem were identified in the corpora examined: *fkali* ("take out"), *kam(n)i* ("do"), *vali* ("put"), *vɣali* ("take out"), while *plini* ("wash") was also disregarded from data analysis; these verbs appeared 22 times. The verb *kam(n)i* ("do") is the dialectal equivalent of the SMG verb *kani* ("do"), which also lacks a perfective stem. The dialectal equivalents of the SMG verb *vɣazi* ("take out") are *fkali* and *vɣali* and the dialectal equivalent of the SMG verb *vazi* ("put") is *vali*. For the SMG verb *vɣazi, vɣal–* is the perfective stem and *vɣaz–* the imperfective stem, while as regards its dialectal equivalents, *vɣali* and *fkali*, the only difference between their perfective and imperfective stems, *vɣal–* and *fkal–* respectively, is the following: their perfective stems involve a lateral [l] while their imperfective stems involve a geminate lateral [l]. The same holds for the CG verb *vali*, whose imperfective stem involves a geminate lateral. It is not, however, easy to discriminate between the two types of lateral sounds in child language, hence, all these verbal forms were taken as lacking a perfective stem. As regards the form *plini* ("wash"), it was used as the dialectal equivalent of the SMG verb *pleni* in the corpora examined. However, in adult CG the verb *pliniski* is in use as the dialectal equivalent of *pleni* and *plin–* is its perfective stem. However, the verb *pliniski* did not occur in child data. It was, thus, unclear whether *plini* was used as a shortened form of *pliniski* or as a perfective form and was, therefore, disregarded from data analysis.

As regards S1's earliest two corpora, the one at age 2;4 and the second at age 2;5, only one form from each corpus, which only appeared once, was excluded for further analysis, namely *plini* ("wash") which appeared in the first corpus and *vɣali* ("take out") which appeared in the second. Thus, while S1 produced 34 verbal structures with a misplaced clitic at age 2;4, and 35 at age 2;5, only 33 and 34 forms respectively were further analysed. As regards his latest two

[6] A single verbal form from S4's corpus whose inflectional ending could not be identified was excluded from the analysis.

corpora, the one at age 2;8 and the other at age 2;10, only two forms, each of which appeared once in each corpus, were excluded from further analysis, namely *vali* (“put”) and *fkali* (“take out”). Thus, while S1 produced 37 verbal structures with a misplaced clitic at age 2;8 and 59 at age 2;10, only 35 and 57 forms respectively were further analysed. As regards S4’s corpus, the following 2 forms that appeared 6 times were excluded from the analysis: *vali* (“put”) and *plini* (“wash”). Thus, only 46 verbal structures out of the 52 that involve a misplaced clitic were further analysed. As for S6’s corpus, *kami* (“do”), *plini* (“wash”) and *vali* (“put”), which appeared 11 times, were excluded from the analysis; thus, only 51 structures out of the 62 structures with a misplaced clitic were analysed.

Table 6.20 reports the absolute numbers of early non–finite as well as finite forms used in constructions in which the clitic is misplaced; the proportions of each type of form are given in parentheses.

Child	Age	MLUw	Early non–finite forms	Finite forms	Overall
S1	2;4	2.38	9 (.27)	24 (.73)	33 (1.0)
	2;5	2.10	16 (.47)	18 (.53)	34 (1.0)
	2;8	2.65	11 (.31)	24 (.69)	35 (1.0)
	2;10	2.57	21 (.37)	36 (.63)	57 (1.0)
S4	2;10	2.99	4 (.09)	42 (.91)	46 (1.0)
S6	2;11	2.78	14 (.27)	37 (.73)	51 (1.0)
Overall			75 (.29)	181 (.71)	256 (1.0)

Table 6.20: Use of finite and early non–finite forms in constructions involving misplaced clitics.

As shown in table 6.20, the overall percentage of structures involving a misplaced clitic and a finite verbal form (71%) outnumber the percentage of structures involving a misplaced clitic and an early non–finite form (29%). In fact, the use of inflectional morphemes in these structures is productive. Table 6.21 reports the absolute numbers of finite verbal forms used in structures involving a misplaced clitic broken down by person and number.

Child	Age	Singular			Plural			Overall
		1st	2nd	3rd	1st	2nd	3rd	
S1	2;4	15	0	0	9	0	0	24
	2;5	11	1	1	4	0	1	18
	2;8	6	1	8	2	1	6	24
	2;10	24	4	3	4	0	1	36
S4	2;10	29	0	3	10	0	0	42
S6	2;11	30	1	1	5	0	0	37

Table 6.21: Finite forms in constructions involving misplaced clitics.

As shown in table 6.21, children mostly use the 1st person singular suffix, while the least used inflectional suffix is the 2nd person plural suffix. The distribution of these inflectional affixes in out study resembles the distribution of non–3SG verb forms in Varlokosta et al.'s (1998) study. For the sake of comparison, I cite their results on the distribution of the non–3SG verb forms in table 6.22. Note, however, that Varlokosta et al. exclude the copula, modals and imperatives from their analysis, while I report all proclisis contexts with a misplaced clitic (including modals).

Child	Age	Singular		Plural		
		1st	2nd	1st	2nd	3rd
Spi, St. I	1;9	4	2	5	0	4
Jan, St. I	1;11	7	0	11	0	3
Jan, St. II	2;5	58	20	19	2	6
Mai, St. II	1;9	29	8	19	0	1

Table 6.22: The distribution of the non–3SG verb forms (excluding the copula, modals and imperatives) (Table 7 in Varlokosta et al. 1998:198).

The results summarised in table 6.20 show that children who misplace clitics use both finite and non–finite forms and, in fact, the percentage of structures involving a misplaced clitic and a finite verbal form outnumbers the percentage of structures involving a misplaced clitic and an early non–finite form. Hence, no correlation is evident between the use of early non–finite forms and target–deviant clitic placement.

6.3. Elicited production experiment

This section presents the results from the experimental investigation, focusing on clitic production and clitic placement. Recall that the children who performed the experimental task are different from those who provided the spontaneous data and were divided into 3 age groups: A: 2;6–3;0, B: 3;0–3;6 and C: 3;6–4;0[7]. Proclisis contexts appear to be problematic for a subset of children from age group A, who misplace clitic pronouns. Between–group comparisons will show that chronological age is an important factor for clitic placement in early CG.

6.3.1. Clitic production

The experiment aimed to elicit structures involving clitic pronouns in two syntactic contexts: root clauses and clauses headed by the modal particles *na* and *enna*. As mentioned in the previous chapter, only structures that were produced in the relevant contexts were categorised as target responses. To be precise, after an experimental question aiming to elicit a root clause, only a root clause was categorised as a target response. Likewise, only a clause headed by a modal particle was categorised as a target response after an experimental question aiming to elicit a *na–*/*enna–*clause.

The participants would occasionally remain silent (even after the experimental question was repeated once). Absence of response was recorded as *No Answer*. The participants would sometimes produce a different type of structure than the required one. To exemplify, the experimental question in (43) aimed at eliciting a root clause. The child in (44) produced a negative utterance as a reply to the experimental question aiming to elicit a root clause and the child in (45) produced a non–clitic structure; responses of this type were coded as *Other Answers*.

[7] See table 5.3 in the previous chapter for full demographic information on the participants in the experiment.

(43) *EXP: Ti ekamen i korua tin alin klatsa?
"What did the girl do with the other sock?"
Target Structure: Evalen/Eforisen tin.
put on/wore–3S it–CL.ACC
"She put it on/wore it"

(44) *CHI: en tin evalen kala
NEG her–CL.ACC put on–3S well (S28, 3;3)
"She didn't put it on well"

(45) *CHI: e(n) foli alin klatsa
NEG wear–3S another sock–ACC
"She doesn't wear another sock" (S11, 2;11)

Table 6.23 reports the raw numbers of no–answers, other answers and clauses of the required type produced per experimental condition, as well as the relevant percentages in parentheses. It should be noted that table 6.23 as well as table 6.24 report group results; the individual results are offered in Appendix II and Appendix III respectively.

Age Group	N	Root Clauses		
		Root Clauses	No Answers	Other Answers
A	18	53/72 (.74)	6/72 (.08)	13/72 (.18)
B	22	68/88 (.78)	3/88 (.03)	17/88 (.19)
C	10	30/40 (.75)	5/40 (.12)	5/40 (.12)
Overall	50	151/200 (.76)	14/200 (.07)	35/200 (.17)
Age Group	N	Na– / Enna–clauses		
		Na– / Enna–clauses	No Answers	Other Answers
A	18	41/72 (.57)	21/72 (.29)	10/72 (.14)
B	22	61/88 (.69)	23/88 (.26)	4/88 (.05)
C	10	29/40 (.73)	8/40 (.20)	3/40 (.07)
Overall	50	131/200 (.66)	52/200 (.26)	17/200 (.08)

Table 6.23: Production of target responses, other answers and no answers per age group per experimental condition (Elicited production experiment).

The results summarised in table 6.23 show that overall 282 target responses were elicited: 151 root clauses and 131 *na–*/*enna–*clauses. There was a

relatively high proportion of *No Answers* and *Other Answers* on both experimental conditions. In particular, after a question aiming to elicit a root clause, the participants would provide no answer or another answer 24% of the times on average, while after a clause aiming to elicit a *na–/enna–*clause, the percentage of no answers/other answers is even higher, representing the 34% of all responses.

At a second stage of data analysis, all the modal clauses produced after an experimental question aiming to elicit a modal clause, as well as all the root clauses produced after a corresponding experimental question were categorized as target and non–target structures. Only structures involving a clitic pronoun were categorised as target sructures. Non–target structures included errors of (clitic) omission (see examples 46–47) and the use of a full noun phrase (NP) instead of a clitic.

(46) Experimental Question: What does mum do with the baby?
*CHI: (θ)kevasi palamiθi.
read–3S fairy–tale.ACC (S12, 2;11)
Target structure: θkevazi tu paramiθi.
read–3S it–CL.DAT fairy–tale.ACC
"S/he reads him a fairy–tale"

(47) Experimental Question: What does the baby want to do with the cow?
*CHI: Na vali mesa.
M put–3S in (S12, 2;11)
Target structure: Na ti vali mesa.
M her–CL.ACC put–3S in
"(She wants) to put her in"

Table 6.24 reports the raw numbers of clitic production, clitic omission and the production of full noun phrases (NP) per experimental condition, as well as the relevant percentages in parenthesis.

Age Group	N	Root Clauses		
		Clitic Production	Clitic Omission	NP
A	18	48/53 (.91)	4/53 (.07)	1/53 (.02)
B	22	62/68 (.92)	5/68 (.07)	1/68 (.01)
C	10	28/30 (.93)	2/30 (.07)	0/30 (0.0)
Overall	50	138/151 (.91)	11/151 (.07)	2/151 (.01)
Age Group	N	Na– / Enna–clauses		
		Clitic Production	Clitic Omission	NP
A	18	38/41 (.93)	3/41 (.07)	0/41 (0.0)
B	22	58/61 (.95)	3/61 (.05)	0/61 (0.0)
C	10	27/29 (.93)	2/29 (.07)	0/29 (0.0)
Overall	50	123/131 (.94)	8/131 (.06)	0/131 (0.0)

Table 6.24: Clitic production and clitic omission per age group per syntactic context (Elicited production experiment).

The results summarized in table 6.24 show that overall 261 target structures were elicited: 138 root clauses and 123 *na–/enna–*clauses involving a clitic pronoun. The rates of clitic omission were relatively low, ranging between 5% and 7%. The use of a full noun phrase (NP) instead of a clitic occurred in merely two cases, one in age group A and another in age group B, as a response to an experimental question aiming to elicit a root clause.

6.3.2. Clitic placement

The second part of data analysis focused on clitic placement. All the elicited target structures were coded as correct and incorrect as follows. As regards the first experimental condition, only root clauses involving a post–verbal clitic were coded as correct, while root clauses involving a pre–verbal clitic were coded as incorrect. As regards the second experimental condition (the modality markers condition), only *na–/enna–*clauses involving a pre–verbal clitic were coded as correct while *na–/enna–*clauses involving a post–verbal clitic were coded as incorrect. Table 6.25 summarises the results of children's clitic placement in the two experimental conditions (first column) per age group (second column). The third and fourth columns report the raw numbers of structures with correct and incorrect clitic placement respectively, while the figures in parentheses show the relevant proportions.

CONTEXT	AGE GROUP	PLACEMENT	
		COR	INCOR
Root Clauses	A	48/48 (1.0)	0/48 (0.0)
	B	61/62 (.98)	1/62 (.02)
	C	28/28 (1.0)	0/28 (0.0)
	Overall	137/138 (.99)	1/138 (.01)
Modality Markers	A	25/38 (.66)	13/38 (.34)
	B	55/58 (.95)	3/58 (.05)
	C	27/27 (1.0)	0/27 (0.0)
	Overall	107/123 (.87)	16/123 (.13)

Table 6.25: Clitic placement per experimental condition (Elicited production experiment).

The children performed in an adult–like way with respect to their clitic placement in root clauses. To be precise, the overall number of clitics produced in root clauses was 138, of which 137 were placed post–verbally, as in the adult language, with only a single use of a pre–verbal clitic. This outcome reveals that children's performance in enclisis contexts is target–like from as early as age 2;6. Turning now to *na*– and *enna*–clauses, a different picture emerges. While children from age groups B and C produce pre–verbal clitics, as required in these contexts, at ceiling percentages (95% for age group B and 100% for age group C), the rate of adult–like performance in age group A reaches only 66%, with 34% of clitics misplaced. Figure 2 plots the proportion of children who manifest correct (grey) and incorrect (black) clitic placement in *na*– and *enna*–clauses for each age group. This figure shows that the number of children who consistently produce misplaced clitics in proclisis contexts decreases with age, with no child older than 3;6 producing any misplaced clitics.

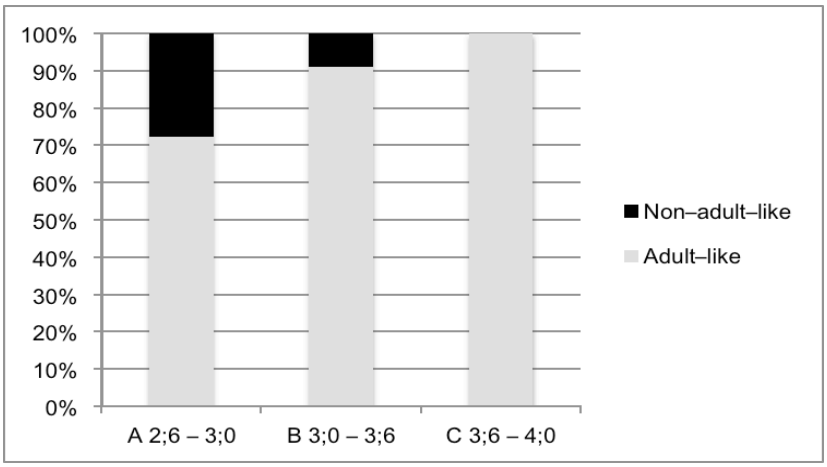

Figure 6.2: Proportion of children exhibiting adult–like and non–adult–like clitic placement in clauses headed by modality markers per age group (Elicited production experiment).

Further analysis was performed on these results in order to validate them statistically, as described in the following subsection.

6.3.3. Between–group analysis for clitic placement

A factorial ANOVA was used for a between–group analysis of children's performance in clauses headed by the modal particles *na* and *enna*. It was shown that children's incorrect clitic placement differs significantly among age groups, $F(2)=3.64$, $p=.034$. Scheffé post–hoc comparisons of the three age groups indicated that the performance of age group A ($M=.72$) differs significantly from that of age group B ($M=.14$) as well as that of age group C ($M=.00$). With regard to the production of misplaced clitics, comparisons between age groups A and B ($MD=.59$, 95% CI [–.06, 1.23]), and between age groups A and C ($MD=.72$, 95% CI [–.08, 1.52]) show a difference approaching significance, with $p=.08$ in each case. However, the difference between age groups B and C ($MD = 0.14$, 95% CI [–.64, .91]) is not significant ($p= .91$).

6.4. Double realisation of the clitic pronoun

An unexpected pattern attested in the spontaneous data of some of the children, namely the double realisation of the clitic pronoun in two positions: immediately

preceding and immediately following the verbal host, has crucial relevance to the interpretation of the results obtained. Thus, further scrutiny is required. As described in the previous chapter, the transcripts of another 11 children, a subset of the children that participated in the experimental investigation, were examined. An exhaustive list of these occurrences is cited below (48–53) and the phenomenon is extensively discussed in the next chapter.

(48) *EXP: ti ena kami o (p)apas ton kafen tu ?
"What is dad going to do with his coffee?"
*CHI: (n)a to (p)ki to <ston ka> [/] ston kanape .
M it–CL.ACC drink–3S it–CL.ACC on–the sofa–ACC
"He will drink it (lying) on the sofa" (S1, 2;8)

(49) *CHI: <ti po su ti nirika> [//] ti po su ?
it–CL.ACC say–1S you–ACC.DAT the nirika–ACC
Na su tin po ti ririka [//] na su tin po? [Intended Utterance]
"Shall I sing *Ririka* for you?"
*CHI: kaθete i rika (s)ti veranta t' ehi te to ɣataki ti(s) konta .
"Ririka is sitting on the balcony and has her cat nearby" (S2, 2;9)

(50) *EXP: ne (.) ti prepi na kami ta paputsha tu ?
"Yes. What shall he do with his shoes?" [Uttered while pointing at a picture with a boy holding his shoes and a dog nearby]
*CHI: (en)a: ta fai ta o (s)kilos .
M them–CL.ACC eat–3S them–CL.ACC the dog–NOM
"The dog will eat them" (P6, 2;8)

(51) *EXP: ama su ðoko to maherin .
*EXP: ti ena kamis to milo ?
"If I give you the knife, what will you do with the apple?"
*CHI: (en)a to kopso to .
M it–CL.ACC cut–1S it–CL.ACC
"I will cut it" (P6, 2;8)

(52) *EXP: esi trois tiri ?
"Do you eat cheese?"

*CHI: o:i (.) e(n) m' are(s)ki mu.
no NEG me–CL.DAT like–3S me–CL.DAT
"No, I don't like it" (P22, 3;2)

(53) *EXP: ta paputsha tu, <hm:> [>] ?
"His shoes? Hm?"
*CHI: <ne> [<] (.) ki ena ta vali ta
yes and M them–CL.ACC put–3S them–CL.ACC
tuta ta .
them–ACC the
"Yes. And s/he will put them these the" (P48, 3;9)

6.5. Summary

Based on the results obtained from the analysis of naturalistic data, both cross–sectional (table 6.5), and longitudinal (table 6.10), as well as experimental data (table 6.25), I report ceiling percentages of target–like clitic placement in root clauses, that constitute an enclisis context, from as early as age 2;6. However, this does not apply to proclisis contexts. Children's clitic placement in these contexts shows a bimodal distribution (displayed in figure 6.1): most children perform in an adult–like way, whereas a subset of children younger than 3 years (approximately one third of the children aged 2;6–3;0) use exclusively post–verbal clitics in both enclisis and proclisis contexts. The longitudinal study shows that these children may consistently misplace clitics for a prolonged period. The experimental investigation shows that this phenomenon diminishes with age (see figure 6.2) with no child older than 3;6 producing misplaced clitics. An interesting phenomenon sparsely attested in the data examined, namely the double realisation of the clitic pronoun, offers useful indications for the interpretation of the results obtained. Building on ideas in Franks (1998), Bošković (2000, 2001) and Franks and Bošković (2001) I account for the developmental patterns attested by appeal to the PF–controlled spell–out of copies (Revithiadou 2006), which is discussed in the next chapter.

CHAPTER 7: THE L1 ACQUISITION OF CLITIC PLACEMENT IN CYPRIOT GREEK

7.1. Introduction

This chapter discusses the theoretical implications of the results obtained for the developmental stages of clitic L1 acquisition, as well as for formal approaches for cliticisation in CG. The first section recapitulates the results of the two studies conducted. The second, third and fourth sections discuss the manifestation of clitic misplacement and the double realisation of the clitic pronoun in early grammars. The fifth section shows whether and to what extent formal accounts on clitic placement in CG can accommodate the developmental patterns attested, while the last section offers an account within the hypothesis of PF−controlled spell−out of copies.

7.2. Recapitulation: the L1 acquisition of clitic placement in CG

The main findings of the two corpus studies (cross–sectional and longitudinal) and the experimental investigation are summarised below:

1. Most CG–speaking children have good clitic production from as early as age 2;4. This is in line with the findings of Grohmann et al. (2012), who report adult–like clitic production in children acquiring CG from age 2. I take the emergence of clitics in child speech to reflect the representation of the relevant lexical items in the child lexicon.

2. The corpora examined show that CG–speaking children produce Single Clitics (SC) and clitic clusters from as early as age 2;4, while Clitic Doubling (CD) in which the clitic is doubled by either a full DP or a strong pronoun was also attested in children as young as 2;4. Notably, the examination of the corpora of the 8 children showed that, while SC and CD constructions are available and productively used by all the participants of the study, CLLD constructions were not attested in all the corpora examined. This observation may

have implications for the debate between approaches that take SC, CD and CLLD to involve the same underlying structure (see Sportiche's (1996) *Uniformity Hypothesis*) and approaches that assume different structure for CD and CLLD (Anagnostopoulou 1994[1]). The acquisition data in the current study seem to pose a problem for the Uniformity Hypothesis (cf. Marinis 2000). However, this issue requires further scrutiny, and is left for further research. What is relevant for the current thesis is that, irrespective of the complexity of the clitic construction involved, clitic placement remains intact. In particular, children with target–like clitic placement exhibit this in SC, CD and CLLD, while children with target–deviant clitic placement misplace clitics in all the different types of structures.

3. Both finite and non–finite enclisis in CG is acquired from the onset of L1A: CG–speaking children exhibit target–like clitic placement in root clauses and imperatives from as early as age 2;4. CG enclitics, both in finite and non–finite contexts, emerge earlier than proclitics.

4. The acquisition of proclisis is delayed in approximately 30% of CG–speaking children aged 2;6 to 3;0, while the remaining 70% of children place clitics pre–verbally in the relevant contexts by age 2;6. Children who have not acquired proclisis overgeneralise post–verbal clitic placement, i.e. enclisis, to proclisis contexts as well. The delayed acquisition of proclisis reveals the salience of the enclitic order, which appears to be the default pattern of clitic placement in CG. Recall that the "salience" of the enclisis pattern over the proclisis pattern is understood as the earliest emergence and the higher degree of accessibility of the former as manifested in TD and language–impaired populations (see Avram & Coene 2007 for Romanian, Mastropavlou et al. 2014, Stephany 1997, Tzakosta 2003, 2004a, 2000b for SMG) with no further theoretical implications at the discourse level.

5. The large number of children exhibiting this target–deviant pattern reveals that this phenomenon marks a distinct developmental stage in the course of L1 acquisition of CG by typically developing (TD) children (Hypothesis 1).

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[1] Anagnostopoulou (1994) assumes that clitics in CD are nominal agreement morphemes and the clitic–doubled object DPs appear within VP, while in CLLD clitics are topic markers and the clitic–doubled object DPs are base–generated IP–adjuncts.

6. The second developmental stage attested in early CG is characterised by the manifestation of both pre– and post–verbal clitic placement in proclisis contexts, while sparse occurences of double realisation of the clitic pronoun in both pre– and post–verbal position are also attested.

7. The third developmental stage involves target–like clitic placement in all syntactic contexts. TD CG–speaking children reach this stage around age 3, while no child in the corpora examined exhibited target–deviant clitic placement after the age of 3;6.

8. The robustness of the phenomenon of clitic misplacement, as documented by the ceiling proportions of misplaced clitics in the speech of some TD children, challenges Petinou and Terzi's (2002) claim that across–the–board clitic misplacement is attested in SLI populations alone.

9. Children may consistently exhibit non–adult–like clitic placement in all the proclisis–triggering syntactic contexts for a prolonged period. Longitudinal data showed that this may last for as long as six months, and does not preclude the possibility that it may be longer. This reveals the robustness of the phenomenon both in its consistency in the direction of the target–deviant placement (only enclisis–pro–proclisis was attested but not proclisis–pro–enclisis) and its duration. I take this finding to reflect the systematic nature of the phenomenon attested and the absence of real optionality from child grammar (Hypothesis 2).

10. Clitic misplacement does not correlate with the use of early–non–finite forms. The mean proportion of co–occurrences of misplaced clitics with a perfective verbal form ending in *–i* in the corpora examined amounts to 29%, with the proportion ranging between 9% and 47%, while the respective mean proportion for finite forms co–occurring with misplaced clitics reaches 71%, with the proportions ranging between 53% and 91%. If target–deviant clitic placement were an epiphenomenon of a non–fully–fledged or non–fully–specified I[2], the

[2] In fact, children with ceiling percentages of misplaced clitics, like S1, seem to have a fully–fledged clause structure. A representative example in support of this claim is cited below: an (arguably) bi–clausal cleft clause (cf. chapter 1 for the syntax of it–clefts in CG) is used by S1 at age 2;10, while his clitic placement is target–deviant.

(1) *CHI: e(n) dhame pu (en)a psa(r)epsi .
is here COMP M fish–3S

proportion of early–non–finite verbal forms co–occurring with misplaced clitics would have been higher than the proportion of finite verbs (Hypothesis 3).

7.3. Clitic misplacement in CG

One of the main findings of the current study is that the acquisition of proclisis is delayed in approximately 30% of CG–speaking children aged 2;6 to 3;0. As regards the remaining 70% of the population in discussion, they use proclisis and enclisis in an adult–like way in the relevant contexts. The individual variability attested in CG–speaking children aged 2;6 to 3;0 as regards clitic placement seeks for an explanation.

One of the hypotheses this thesis has explored was the possibility that clitic misplacement in CG is an epiphenomenon of a defective inflectional domain (Hypothesis 3). As outlined in chapter 5, if this line of argumentation is correct, the proportion of early non–finite verbal forms used in constructions involving misplaced clitics should be significantly higher than that of finite verbs. The analysis performed on the corpora of all the children who consistently misplaced clitic pronouns revealed that children who misplace clitics use both finite and non–finite forms and, in fact, the percentage of structures involving a misplaced clitic and a finite verbal form (71%) outnumbers the percentage of structures involving a misplaced clitic and an early non–finite form (29%). This piece of evidence shows that no correlation seems to hold between a defective Inflection and target–deviant clitic placement.

Another hypothesis is that non–adult–like clitic misplacement co–occurs with non–adult–like clitic production. Recall that the following 3 participants: S1, S4 and S6 had ceiling percentages of incorrect clitic placement in proclisis contexts (see table 6.5). Let us consider the results reported in table 6.1 (repeated below for ease of reference) for clitic production and clitic/object omission in the spontaneous data. S1 and S6 produced omitted clitics/objects 7% to 8% of the time, a rate of omission that was at comparable levels with the rest of the participants, with the exception of S4 who had the second highest rate of

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"It is here that s/he will fish" (S1, 2;10)

clitic/object omission (14%). One may argue that S4's relatively high rate of clitic/object omission relates to his ceiling proportions of clitic misplacement. This, however, does not hold for S1 and S6, who consistently misplaced clitics as well, while the participant who exhibited the highest rate of clitic/object omission (16%), S2, misplaced clitics only 10% of the time. Thus, clitic misplacement does not seem to be contingent on clitic/object omission either.

Child	Age	MLUw	Clitic Production	Clitic/Object Omission
S1	2;4	2.38	69/74 (.93)	5/74 (.07) [1/5]
S2	2;9	2.78	69/82 (.84)	13/82 (.16) [6/13]
S3	2;9	3.87	110/116 (.95)	6/116 (.05) [1/6]
S4	2;10	2.99	134/156 (.86)	22/156 (.14) [2/22]
S5	2;10	2.19	68/75 (.91)	7/75 (.09) [1/7]
S6	2;11	2.78	120/131 (.92)	11/131 (.08) [2/11]
S7	3;4	2.96	63/68 (.93)	5/68 (.07) [3/5]
S8	3;4	3.93	279/296 (.94)	17/296 (.06) [6/17]

Table 6.1: Clitic production and clitic/object omission (Spontaneous data).

The discussion so far has revealed that clitic misplacement in early CG is neither related to non–adult–like clitic production nor to a defective inflectional domain. Does clitic misplacement correlate with another target–deviant phenomenon in early CG? The examination of the corpora of spontaneous production has offered no indications. However, based on parental observations as regards earlier stages in their children's development we speculate that the 70% of the population in discussion that did not manifest this target–deviant pattern of clitic placement between age 2;6 to 3;0 must have passed through this stage at an earlier time in development. This remains to be confirmed on the basis of more data and remains an open question for future research.

An important conclusion we can, yet, draw on the basis of the results obtained as regards the individual variability attested in CG–speaking population aged 2 to 4 is that the transition from the target–deviant to the target–like clitic

placement in the course of L1A in CG seems to be a relatively rapid process. This is evident from the results obtained from both the spontaneous and the experimental study. The participants of the spontaneous study had either ceiling percentages of adult–like clitic placement or non–adult–like clitic placement in proclisis contexts as illustrated in table 6.5 (repeated below for ease of reference). In addition, all the 50 children who performed the experimental task were consistent as regards their clitic placement in clauses headed by *na/enna* (proclisis contexts): they would place the clitic either pre–verbally or post–verbally in all the modal clauses they produced. If our study had revealed bimodal distribution as regards clitic placement in proclisis contexts, this could have been taken as evidence of a rather prolonged transitional stage from the target–deviant to the target–like pattern. Most importantly, no participant of either the spontaneous or the experimental study has manifested a bimodal distribution as regards his clitic placement. On the basis of this outcome, we can safely conclude that this transitional stage is a relatively rapid process in the acquisition of CG.

Child	Age	Enclisis Context		Proclisis Context	
		COR	INCOR	COR	INCOR
S1	2;4	35/35 (1.0)	0/35 (0.0)	0/34 (0.0)	34/34 (1.0)
S2	2;9	27/27 (1.0)	0/27 (0.0)	38/42 (.90)	4/42 (.10)
S3	2;9	51/51 (1.0)	0/51 (0.0)	58/59 (.98)	1/59 (.02)
S4	2;10	81/81 (1.0)	0/81 (0.0)	1/53 (.02)	52/53 (.98)
S5	2;10	34/34 (1.0)	0/34 (0.0)	32/34 (.94)	2/34 (.06)
S6	2;11	57/57 (1.0)	0/57 (0.0)	1/63 (.02)	62/63 (.98)
S7	3;4	31/31 (1.0)	0/31 (0.0)	30/32 (.94)	2/32 (.06)
S8	3;4	127/127 (1.0)	0/127 (0.0)	146/152 (.96)	6/152 (.04)

Table 6.5: Correct and incorrect clitic placement in enclisis and proclisis contexts (Spontaneous data).

7.4. Clitic misplacement in early grammars

CG–speaking children at the first developmental stage in the course of clitic L1 acquisition overgeneralise the enclisis pattern to all syntactic contexts, including proclisis contexts as well. This target–deviant pattern is not exclusively attested in early CG. Lobo and Costa (2012) report clitic misplacement in proclisis contexts

in early European Portuguese (EP), while Stephany (1997) and Tzakosta (2003, 2004a, 2004b) report sparse instances of clitic misplacement at the onset of the L1 acquisition of SMG.

Lobo and Costa (2012) offer ample evidence that EP–speaking children pattern like CG–speaking children and misplace clitic pronouns in proclisis contexts, while some instances of misplacement were attested in enclisis contexts as well. The examples cited below from early EP (taken from Lobo & Costa 2012) illustrate the target–deviant productions of young children in negative clauses (1–2), wh–questions (3–4) and subordinate clauses (5–6). Similar productions by the CG–speaking participants of the current study in negative clauses, wh–questions and subordinate clauses appear in chapter 6 as examples (19–20), (32–33) and (23–25) respectively.

Negative Clauses

(1) O mano não deixa–me dormir.
The brother NEG let–CL.1S sleep
"My brother does not let me sleep" (J., 3;8)

(2) Não chama–se nada.
not call–CL.3Refl nothing
"It isn't called anything" (M., 20 months) (Duarte et al. 1995)

Wh–questions

(3) Porque partiu–se, mãe?
Why broke–CL.3Refl mum
"Why did it break, mum?" (J., 3; 4)

(4) Porque é que foste–me interromper?
Why is that went–CL.1S interrupt
"Why did you interrupt me?" (R., 2;5) (Duarte et al. 1995)

Subordinate Clauses

(5) Foste tu que daste–me.
Were you that gave–CL.1S
"It was you that gave it to me?" (J., 4;8)

(6) Foi a Mariana que deu–me este?

Was the Mariana that gave–CL.1S this

"It was Mariana that gave me this one" (Sandra, 3;1) (Soares 2006:375)

(7) Foi alguém que meteu–me nesta fotografia?

Was someone that put–CL.1S in this picture

"It was someone that took this picture for me" (J.G, 3;3) (Duarte et al. 1995)

However, Lobo and Costa (2012) mention that proclisis is also attested in enclitic contexts in early EP. They offer three examples of such clauses, which I cite in (8–10). Notably, all these examples involve a pre–verbal constituent, specifically either a subject (9–10) or an object (8). Recall that European Portuguese requires a pre–verbal clitic with focused initial constituents (cf. section 2.3.5 in chapter 2). Moreover, EP is a pro–drop language. Overt subjects in pro–drop languages are either topicalised or focused constituents. Thus, it is not clear whether the clause initial constituent in (9–10) constitutes a topicalised or a focused DP in subject position; the former would require a post–verbal clitic, while the latter a pre–verbal clitic, as in (9–10). Nevertheless, example (8) is an uncontroversial case in which proclisis is manifested instead of enclisis.

(8) Uma carta me caiu, do pokémon.

A letter CL.1S fell from_the pokemon

"A letter fell from my pokemon" (J., 4;8)

(9) Se queres levar isto, eu te empresto.

If want–2S to_take this, I CL.2S lend

"If you want to take this, I will lend it to you" (J., 3;6)

(10) Eu te empresto um, pai.

I CL.2S lend one daddy

"I will lend you one, daddy" (J. 3;7)

In CG, on the other hand, only 4 cases of proclisis in root clauses, which constitute enclisis contexts in CG, were attested. The exhaustive list of these occurrences is cited in (11–14); the experimenter's utterance is included as well so

that the linguistic context is accurately represented. However, only two of these occurrences can be unequivocally claimed to be true instances of proclisis–pro–enclisis: namely (11) and (12), both of which were produced by P44 at age 3;7.

(11) *EXP: ne:, <ti ekaman tu:> [/] ti ekaman tu: [/] tu simba ?
"Yes, what have they done, what have they done to Simba?"
*CHI: en iks(ero) +//.
"I don't know"
*CHI: +, ekaman tu etsi .
"They have done this to him"
*CHI: tu evalan etsi to fteron tu.
him–CL.DAT put–3PL like this the feather–ACC his–POSS
"They put him his feather like this"
*EXP: ti:?
what?
*CHI: ekaman tu etsi to ftero .
did–3PL him–CL.DAT like this the feather–ACC (S44, 3;7)

(12) *EXP: pkjes en tutes?
"Who are they?"
*CHI: i files tis (.) kapu tes
the friends–NOM her–POSS somewhere them–CL.ACC
idhame dze tes iksera .
saw–3PL and them–CL.ACC knew–1S
"Her friends. We have seen them somewhere and I knew them"
(S44, 3;7)

The utterance in (11) involves a clitic that occupies the first position in the clause. This pattern violates the basic tenet of Tobler–Mussafia clitic languages according to which clitics are banned from clause initial position. However, two lines below, the child repeats the utterance in a slightly modified form but, interestingly, with post–verbal clitic placement. The child's utterance in (12) consists of two instances of a clitic and a finite verb. The first one follows a

locative adverb, a proclisis context, and the second appears immediately after a coordination conjunction. Even though the latter is not a proclisis trigger, proclisis occurs.

The two other child utterances involving a pre–verbal clitic in an enclisis context that occurred in the corpora examined are cited in (13) and (14). In (13) the clitic pronoun immediately follows an overt subject; hence, the same observations apply as for the EP examples in (9–10). In (14) the child uses a single clitic followed by a target–deviant verb form, realised as *plini*. It is not clear whether this constitutes a truncated form of the CG verb *pliniski* ("washes") or a variant of the SMG equivalent *pleni* ("washes").

(13) *EXP: pe mu aghapi mu .
"Tell me, my love"
*CHI: <o mako xxx mba(njo)> [?] .
"Mako [unintelligible] ba(th)"
*EXP: o ma ?
"Ma(ko)?"
*CHI: o mako ton kamni mbanjo .
the mako–NOM him–CL.ACC bath–3S
"Mako baths him" (S6, 2;8)

(14) *EXP: ti kamni ta pkjata ?
"What does s/he do with the dishes?"
*CHI: ta plini .
them–CL.ACC wash–3S
"S/he washes them" (S30, 3;3)

The fact that the child in (14) opts for a verb form like *plini* that resembles the SMG equivalent *pleni* is not without explanation. This is related to the linguistic situation in Cyprus that has been identified as a state of diglossia (Newton 1972), in the sense of Ferguson (1959). SMG is the official language of the island (together with Turkish and English), which is used in education, in the media and administration, and sociolinguistically has the status of the *high*

variety. CG, on the other hand, is used in informal conversations and everyday communication and has the status of the *low variety*. Moreover, the variety used for written production in education, in the press and administration is SMG alone. CG–speaking children are exposed to SMG (or to the *Cypriot Standard Greek* in Arvaniti's (2010) terminology[3]) especially through schooling (see Ioannidou 2009, Ioannidou & Sophocleous 2010, Pavlou & Papapavlou 2004, Yiakoumetti et al. 2005 for teachers' and students' language use in primary and secondary state education in Cyprus). As a result, Greek–Cypriot children may occasionally switch to SMG.

Let us, now, return to the 4 cases of pre–verbal clitic placement in root clauses attested in our database and presented in examples (11–14): in the light of the current linguistic situation in Cyprus, examples (11), (12) and (14) can be easily accounted for as instances where the SMG pattern of clitic placement is employed by the children. In (13) the presence of an overt subject makes the pre–verbal placement of the clitic pronoun a legitimate option within the CG variety as well. All in all, the very few instances of pre–verbal clitic placement in enclisis contexts as well as the fact that all the children from both the spontaneous study and the experimental study had ceiling percentages of post–verbal clitic placement in enclisis contexts (see tables 6.5 and 6.25) invites us to conclude that young CG–speaking children manifest post–verbal placement in enclisis contexts. In any case, even if larger numbers of pre–verbal clitic placement were attested in enclisis contexts, this would have been explained as instances of code–switching between the high (SMG) and the low (CG) variety.

In contrast, the large number of cases with post–verbal clitic placement in proclisis contexts offers ample evidence for the claim that (one third of) young CG–speaking children (aged 2;6–3;0) overgeneralise the enclisis pattern to proclisis–triggering contexts as well. Most importantly, these cases are of different nature: post–verbal clitic placement in negatives, in clauses headed by modal particles, wh–elements and other proclisis triggers is illicit in any variety of

[3] Arvaniti (2010) argues that SMG as used in Cyprus has been increasingly diverging from the Standard variety as spoken in Greece up to a level where the two are recognizably different, and uses the term *Cypriot Standard Greek* to describe the former.

Greek I am aware of. Thus, these instances clearly constitute cases of a target–deviant grammar.

Stephany (1997) and Tzakosta (2003, 2004a, 2004b) report misplacement errors in early SMG as well, and in accordance with the data from early CG, these are instances of the manifestation of enclisis–pro–proclisis alone, while proclisis–pro–enclisis was not attested. In particular, 3 tokens were attested in the speech of 2 out of 5 children whose corpora were examined by Stephany. In these tokens, an enclitic was used with a non–imperative verb (see example (62b) in Stephany 1997:272, repeated as (10) in chapter 4), while Tzakosta (2003, 2004a) reports instances in which an enclitic is used instead of a proclitic (but never vice versa), and provides the examples in (15–17) in support of her claim.

(15) /θa.to.'vγalo/ → ['γa.lo.to] "I will take it (CL) out"
(16) /θa.to.'valo/ → ['va.lo.to] "I will put it (CL)"
(17) /θa.to.'paro/ → ['pa.lo.to] "I will take it (CL)"

7.5. Double realisation of the clitic pronoun in early grammars

Additional to the cases of clitic misplacement, it is worth devoting attention to the phenomenon of double realisation of the clitic pronoun, as it will also help shed some light on the former phenomenon. As mentioned in the previous chapter, instances of double realisation of the clitic pronoun are attested in the corpora examined. The exhaustive list is offered in section 6.4. However, this target–deviant pattern has not only been attested in early CG. Lobo and Costa (2012) report a few instances of double realisation of the clitic pronoun in both pre– and post–verbal position in early EP. Examples (18–19) are taken from Lobo and Costa (2012). Notably, these occurrences were attested in proclisis contexts alone, showing that these contexts are problematic not only for CG–speaking children but also for EP–speaking children.

(18) Eu disse que não se põe–se em pé.
I said that NEG CL.3S.Refl put–CL.3S.Refl in foot

"I said that it doesn't stand up" (J., 3; 4)

(19) Não te engasgas–te nada!
NEG CL.2S choke–CL.2S nothing
"You don't choke at all!" (R., 2;5) (Duarte et al. 1995)

This target–deviant pattern with the clitic pronoun realised in two positions in the clause will play an important role in the evaluation of the formal accounts of clitic placement in CG. I return to this type of structure in section 7.7 and, building on ideas in Franks (1998) and Franks and Bošković (2001), I argue that the clitic is realised in its raised position (pre–verbal placement) while a copy left behind upon the manifestation of clitic movement is realised in a lower position (post–verbally), causing the dual realisation of the clitic pronoun.

7.6. Developmental patterns and formal accounts of clitic placement in CG

The acquisition data and the developmental patterns attested are expected to contribute to a better understanding of the nature of cliticisation in CG from a theoretical perspective and facilitate the evaluation of competing analyses of the proclisis–enclisis alternation in CG. In the light of new evidence for clitic misplacement and double realisation of the clitic pronoun in early CG, we can now evaluate the syntactic, prosodic and interface accounts of clitic placement in CG presented in chapter 3.

Purely syntactic accounts like Agouraki's (2001) and Terzi's (1999a, 1999b) share the assumption that enclisis derives from proclisis with the manifestation of verb movement. Agouraki (2001) postulates V–to–C, while Terzi (1999a, 1999b) postulates V–to–M. This assumption implies that derivationally enclisis involves an extra step, realised as movement of the verb to C or to M, as compared to proclisis. This predicts that the latter should be easier to acquire than the former. Data from early CG, however, have revealed that enclisis is acquired first. This preference for enclisis, realised as its overgeneralisation in all syntactic contexts, requires explanation. If we follow either Agouraki's (2001) or Terzi's (1999a, 1999b) line of reasoning we would have to argue that the derivationally

more complex pattern, namely enclisis, is in fact easier to acquire. Such a position is unequivocally counter–intuitive, and hence undesirable.

An alternative line of thinking would be to attribute the overgeneralisation of the enclisis pattern to the overgeneralisation of verb movement and to assume, following proposals in Petinou and Terzi (2002), that children initially misanalyse the X–bar status of the inflectional particles heading MP, which regulate finite verb movement. The basic tenet of Petinou and Terzi's (2002) account is that even though these inflectional particles are heads (of MP) in adult language and thus able to satisfy the feature checking requirements of M, in child grammar they are perceived as phrasal specifiers (located in the SpecMP) or adjuncts, and hence unable to check the verbal features of M. Such a claim lacks empirical justification (see discussion in chapter 4), since the evidence provided by Petinou and Terzi (2002) is found in SLI data alone. However, even if this analysis were valid, it would still fail to account for the instances of double realisation of the clitic pronoun in child Cypriot Greek.

The purely prosodic account put forward by Condoravdi and Kiparsky (2001) states that enclisis derives by Prosodic Inversion (PI), if no suitable prosodic host is available on the left of the clitic pronoun. If, however, a non–adjoined constituent appears on the left of the clitic pronoun within the same CP, no PF operations need to take place and proclisis follows. In order to account for the acquisition data within Condoravdi and Kiparsky's (2001) account, one must postulate redundant applications of PI in all syntactic contexts and assume that children have not yet acquired the restrictions imposed on this operation. Even so, once again, the phenomenon of clitic double realisation would remain unaccounted for. To clarify, PI has an effect on the relative order of constituents, but there is no obvious way in which it can result in the realisation of the clitic pronoun in two positions.

Turning now to Mavrogiorgos' (2012) analysis, it must be noted that while superficially it may seem similar to Agouraki's (2001) and Terzi's account in that it assumes verb movement to F in finite enclisis, it differs in a crucial respect: Mavrogiorgos assumes that enclisis and proclisis derive independently. He, further, indicates (p.c.) that enclisis in CG involves the following operations:

agree or *select*, clitic *movement* and *PF inversion*, whereas proclisis involves *agree* and *incorporation*. Hence, *agree* is involved in the manifestation of both enclisis and proclisis. For enclisis, two additional operations are implemented, clitic *movement* and *PF inversion*, whereas for proclisis *incorporation* (of the clitic pronoun to its verbal host) applies. From an acquisition perspective the question is whether clitic *movement* and *PF inversion* are easier for children to acquire than *incorporation*. In the absence of suitable evidence, this remains an open question. However, even if one could prove that children acquire the former set of operations earlier than *incorporation*, Mavrogiorgos' (2012) analysis faces the same problem as the aforementioned analyses: under no condition does the clitic pronoun appear in a double position in the clause.

Having found no entirely satisfactory answer in all the accounts discussed so far, I will examine Revithiadou's (2006) account in the next section.

7.7. Developmental patterns and the PF−controlled spell−out of copies

Within Revithiadou's analysis (2006), clitic pronouns in CG move from the VP to the inflectional head to which the verb raises and copies are left behind (Chomsky 2000). In the spirit of Franks (1998) and Franks and Bošković (2001), the pronunciation of such a chain is decided in the PF: the chain is produced in the head position, unless this leads to a PF violation. When a functional constituent is realised in the same Intonational phrase (henceforth I–phrase) (Selkirk 1995) as the clitic, the higher copy is realised, whereas when no such constituent is present, the lower clitic is realised. With respect to their prosodisation, Revithiadou (2006, 2008) proposes that post− and pre−verbal clitics in CG differ with respect to the way they prosodise to their verbal host. Post−verbal clitics are always incorporated into the PrW of their verbal host and appear as internal enclitics: [V cl]$_{PrW}$, while pre−verbal clitics are either parsed together with the preceding (stressed) function word as prosodic words: [fnc cl]$_{PrW}$ [V]$_{PrW}$, or they join into a recursive PrW structure with the (unstressed) function word and the verb and they

appear as affixal proclitics: [fnc cl [V]$_{PrW}$]$_{PrW}$[4] .

Revithiadou's (2006) account seems promising for accommodating the two main findings of the current study: the overproduction of the enclisis pattern at the onset of L1 acquisition and the occasional realisation of the clitic pronoun in two positions, i.e. both preceding and following the finite verb. In the first place, the proposal put forward by Franks (1998) and Franks and Bošković (2001) and adopted by Revithiadou (2006) for the production of copies in non−trivial chains can straightforwardly account for the double realisation of the clitic pronoun in child data. In the second place, the different prosodic organisation of the clitic−verb cluster depending on their relative order explains the salience of the enclisis over the proclisis pattern.

Nevertheless, some scrutiny is required in order to clarify these aspects. Let us start from the latter point. Revithiadou (2006) claims that while enclitics are always incorporated into the PrW of their verbal host, proclitics are either incorporated into the PrW of the preceding (stressed) function word[5] or they are parsed as affixal proclitics with the preceding (unstressed) function word. Thus, at PF, the verb−enclitic cluster differs from the proclitic−verb cluster in a crucial respect: only the former is parsed as a single prosodic word. Due to the divergence in the prosodisation of the enclitic versus the proclitic pronouns, the salience of the enclisis over the proclisis pattern in early data follows. Evidence justifying the salience of enclisis over proclisis across languages/varieties is offered by Avram and Coene (2007) for Romanian, Mastropavlou, Petinou and Tsimpli (2014), Stephany (1997) and Tzakosta (2003, 2004a, 2000b) for SMG, and Bermúdez–Otero and Luís (2009) for EP.

Avram and Coene (2007) report that post–verbal clitics emerge earlier in child Romanian than pre–verbal ones. They carried out a longitudinal study on the emergence of accusative direct object clitics (ADOCs) in Romanian (see chapter 4) and report that the first attested clitic in both corpora examined (Bianca 1;05–

[4] Modal particles like *na* and *tha* carry no stress and procliticise to the non–imperative verb form (Revithiadou & Spyropoulos 2008); this applies to *enna*, the dialectal equivalent of *tha* in CG non–negated clauses as well.

[5] In the current chapter, the term *function word* is used pre–theoretically to refer to modal and negative particles, complementizers and wh–elements (see an identical use of the term in Revithiadou & Spyropoulos 2008).

2;10 & Antonio 1;09–3;05) was the feminine singular clitic *o* ("her"). Recall that *o* is the only clitic that surfaces post–verbally in restricted finite contexts, namely in periphrastic constructions with the auxiliary *avea* ("have")[6]. Tables 7.1 and 7.2 show the use of pre– and post–verbal clitics in Antonio's and Bianca's corpora respectively.

Age	1;9	2;0	2;1	2;2	2;3	2;4	2;5	2;6	2;6.30	2;7
Post–verbal *o*	6	4	2	2	8	5	5	2	9	9
Other post–verbal	0	0	0	0	0	0	1	0	0	0
Pre–verbal	0	0	0	0	3	0	5	5	12	14
Total	6	4	2	2	11	5	11	7	21	23

Table 7.1: Pre– and post–verbal ADOCs in Romanian (Antonio corpus) (Avram & Coene 2007:20, table 2)

Age	2;0	2;0.21	2;1.11	2;1.23	2;1.29	2;2	2;3
Post–verbal *o*	2	4	2	0	0	0	0
Other post–verbal	0	0	0	1	0	0	0
Pre–verbal	0	0	0	4	1	2	1
Total	2	4	2	5	1	2	1

Table 7.2: Pre– and post–verbal ADOCs in Romanian (Bianca corpus) (Avram & Coene 2007:20, table 3)

As shown in tables 7.1 and 7.2, post–verbal *o* is the only clitic used until age 2;3 by Antonio and until age 2;1.23 by Bianca. Avram and Coene report than Antonio and Bianca exclusively used post–verbal *o* in the early stages of L1A irrespective of the feature specification of the clitic's antecedent. Examples (20–21) illustrate the substitution errors reported in Avram and Coene (2007) with the feminine clitic (*o*) used in contexts in which a masculine clitic is required.

(20) Adult: Ce–ai facut cu ligheanul (MASC)?
"What have you done to the bowl?"

[6] The exceptional behaviour of the singular feminine clitic has been attributed to morpho–phonological requirements on clitic combinations (Marin 2004) as well as to a coalition of factors, some of which are phonological (Avram 2000); see the discussion in section 4.3.2 of chapter 4 and, in particular, footnote 8 of that chapter.

Child: Spart–o.
Broken_CL.ACC.FEM
"I broke it" (A., 1;9)

(21) Child: Pun pestele si o p(r)ind asa.
Put–1S fish_the and CL.ACC catch–1S like this
"I put the fish and I catch it like this" (B., 2;5.18)

Turning now to SMG, Stephany (1997) and Tzakosta (2003, 2004a, 2004b) show that enclitics are acquired earlier than proclitics[7]. The results of these studies can be taken as indirect evidence for the salience of enclitics over proclitics within the same language, while Mastropavlou, Petinou and Tsimpli (2014) offer indirect evidence for the salience of enclitics over proclitics between languages/varieties.

Stephany (1997) reports that by age 1;10, 3 out of the 5 children she studied (Mairi, Janna and Spyros) use accusative and genitive clitics only enclitically, while proclitic pronouns occur in the speech of 2 children only (Mairi and Spyros). She takes this to indicate that enclitics are used productively before proclitics (1997:238).

Tzakosta's (2003, 2004a, 2004b) results confirm Stephany's (1997) observations. Tzakosta dealt with phonological aspects of the acquisition of clitics in SMG on the basis of longitudinal data from 6 children: Melitini (1;07.05−2;04.27), Bebis 1 (1;09.22−2;10.23), Bebis 2 (1;10−2;01.05), Felina (1;11.07−3;09.19), Dionisis (2;01−2;09) and Marilia (2;07.06−3;05.23)[8]. Tzakosta observes an asymmetry in the acquisition of proclisis as compared to enclisis: enclitics, both single clitics and clitic clusters, emerge first, while proclitics emerge in a subsequent stage. The developmental stage in which SMG−speaking children produce only enclitics covers the age range from 1;07.05 to 1;10. Table 7.3 summarises the results for the production of enclitics and proclitics in child Greek reported in Tzakosta (2003, 2004a, 2004b).

[7] However, note that Marinis (2000) reports simultaneous emergence of both pre– and post–verbal clitics (see chapter 4 for an extensive discussion).
[8] These data come from two corpora (Tzakosta & Metaxaki) from the database of the University of Leiden Centre for Linguistics.

Clitics	Enclitics		Proclitics	
	Produced	Omitted	Produced	Omitted
Melitini	90/94 (.96)	4/94 (.04)	304/328 (.92)	24/328 (.07)
Bebis 1	107/110 (.97)	3/110 (.03)	332/376 (.88)	44/376 (.12)
Bebis 2	16/16 (1.0)	0/16 (0.0)	9/26 (.35)	17/26 (.65)
Felina	67/71 (.94)	4/71 (.06)	369/387 (.95)	18/387 (.05)
Dionisis	23/23 (1.0)	0/23 (0.0)	205/220 (.93)	15/220 (.07)
Marilia	38/38 (1.0)	0/38 (0.0)	195/195 (1.0)	0/195 (0.0)

Table 7.3: Production and omission of single enclitics and single proclitics (based on tables 1 & 2 in Tzakosta 2003).

Tzakosta's (2003) claim for the salience of the enclisis pattern as compared to the proclisis pattern is supported by the results reported in table 7.3. The results show that the proportion of overt clitics, which she calls *percentage of preservation*, is lower in proclisis than in enclisis contexts, and, conversely, the proportion of omission is higher in proclisis than in enclisis contexts. In line with Revithiadou (2006), Tzakosta (2003) argues that enclitics are word internal. She stresses that enclitics are post−stress elements that can perfectly fit the *minimal prosodic word*[9] in early production. She offers the fused productions of verb−enclitic clusters, as in /'dhos(e)mu/→ ['dho.mu] "give me.DAT", as evidence for that claim. Furthermore, she observes that, during the stage in which children truncate their prosodic words, the stressed and rightmost syllables are faithfully kept, as they signal word boundaries. For Tzakosta (2003, 2004a, 2004b), phonology outranks syntax with respect to the acquisition of clitic pronouns. Moreover, she attributes the observed enclisis−proclisis asymmetry to phonological, segmental, and prosodic, as well as perceptual factors.

The salience of enclisis over proclisis within the same language/variety is adequately justified on the basis of the studies conducted by Stephany (1997) and Tzakosta (2003, 2004a, 2004b), while Mastropavlou, Petinou and Tsimpli (2014) show the salience of enclisis over proclisis to hold between languages/varieties as well. They tested clitic production in root clauses with [+/−PAST] verb forms in two groups of SLI children: CG− and SMG−speaking. As already shown, CG and

[9] Tzakosta (2003) assumes that Greek children employ the *Minimal Word Template* (see Tzakosta 2003 and references therein) at the onset of L1A.

SMG display an interesting divergence with respect to clitic placement in root clauses, with the former exhibiting enclisis and the latter exhibiting proclisis. Mastropavlou et al. administered a speech elicitation task to CG− and SMG−speaking children from 3 groups: an SLI group aged 5 to 6, an TD age−matched group, and a TD language−matched group aged 3;4 to 4;4. They showed that enclitic production in CG−speaking children with SLI was significantly better than proclitic production in their SMG−speaking peers.

Table 7.4 summarises the results obtained from the speech elicitation task performed by CG− and SMG−speaking children from these 3 groups: an SLI group, a TD age−matched and a TD language−matched group.

Group	SLI/SMG	SLI/CG	TD/SMG (age)	TD/CG (age)	TD/SMG (lang)	TD/CG (lang)
PRES	.70	.89	.96	.97	.91	.94
PAST	.64	.81	.92	.80	.87	.92

Table 7.4: Mean clitic production per group in the present and past condition (based on figure 1 in Mastropavlou et al. 2014).

The performance between the CG and SMG control groups (both the age−matched and the language−matched) seems to differ. However, these differences are not statistically significant. The performance of the two SLI groups, on the other hand, differs significantly, with the CG group performing better than the SMG group (p=.016), but only in constructions involving present tense verbal forms.

Mastropavlou et al. (2014) do not take this outcome to indicate that morpho−phonology plays a role in clitic acquisition in impaired populations alone. Instead, they suggest that similar effects may be attested in typically developing children before syntactic knowledge is fully acquired. Hence, their prediction is essentially that if younger TD children were tested in clitic production, CG−speaking children would have performed better than the age−matched SMG group. Hence, the crucial factor affecting the performance of the two groups for Mastropavlou et al. (2014) is the pattern of placement. One implication of such a proposal is that the advantage in salience for the enclisis pattern over the proclisis pattern boosts clitic production.

The different status of enclitics as compared to proclitics with regard to their relation to their verbal host seems to hold in another language that exhibits clitic misplacement in early stages of L1A, namely EP. Bermúdez–Otero and Luís (2009) have convincingly argued that EP enclitics belong to the same grammatical word (GWd)[10] as their verbal host, while EP proclitics lie outside the GWd containing the verb. In other words, EP enclitics are incorporated into their verbal host at the word–level, while EP proclitics are incorporated at the phrase–level. Lobo and Costa (2012) offer some examples that can be taken as corroborative evidence for the above claim. In particular, they cite examples in which the enclitic (incorrectly) precedes the verbal agreement. This reveals that EP enclitics are incorporated into their host at the word–level, while EP proclitics, for which no such evidence is available, are presumed to be incorporated at the phrasal–level.

(22) Dá–me–s uma moeda no meu porquinho?
Give–CL.1S–AGR.2S a coin in the my little pig
"Will you give me a coin for my little pig?" (J., 3; 4)

(23) Ai, duas pessoas a agarrar–me–m!
Oh, two people to grab–CL.1S–AGR.3PL
"Oh, two people grabbing me!" (J., 3; 5)

The salience of enclisis in child grammar both within as well as between languages/varieties has thus been established on the basis of various studies (Avram & Coene 2007, Lobo & Costa 2012, Mastropavlou et al. 2014, Stephany 1997, Tzakosta 2003, 2004a, 2004b).

Turning now to the other aspect of Revithiadou's (2006) analysis, namely the availability of copies of the clitic pronoun both pre− and post−verbally, I offer evidence from the acquisition of verbal morphology in English. It is well−known that double–auxiliary constructions of the type shown in (24) are widely attested in child English.

[10] Grammatical word (GWd) defines a word–level phonological domain.

(24) What did the smurf didn't buy?
(Actual example collected by Hiramatsu 1997; 2000a; 2000b in Bošković 2001:117)

Hiramatsu (1997, 2000a; 2000b) examines this type of structure and claims that such a non–adult–like production can be attributed to two phenomena: the misanalysis of *n't* as constituent rather than sentential negation, and the double realisation of the copy of the auxiliary. Let us clarify this point, following Hiramatsu. The clause structure of (24) appears in (25), which shows the instances of movement and the copies left behind: the subject moves to the specifier of IP, the wh–phrase to the specifier of CP, and I to C.

(25) [$_{CP}$ What [$_{C'}$ I [$_{IP}$ the smurf [$_{I'}$ I [$_{VP}$ n't [$_{VP}$ the smurf buy what]]]]]]
(Bošković 2001:117)

Upon the manifestation of the wh– movement and the subject movement, the heads of the chains are pronounced. As for the I–to–C movement, the head is pronounced and *do*–support takes place in order for the Stranded Affix Filter[11] not to be violated. Hence, the raised I is spelled out as *did*. However, the tail of the chain I–to–C cannot be deleted, because, if it was, the negative clitic *n't* would not have a proper lexical host, and the construction would crash in PF. In order to avoid a PF violation, the tail is pronounced as well and *did* serves as the host for *n't*.

(26) [$_{CP}$ What [$_{C'}$ did [$_{IP}$ the smurf [$_{I'}$ did [$_{VP}$ n't [$_{VP}$ ~~the smurf~~ buy ~~what~~]]]]]]
(Bošković 2001:118)

The double auxiliary construction in (24) is reminiscent of the double clitic constructions attested in my database, cited in examples (48–53) in chapter 6. Let us try to capture exactly how the derivation of such a construction proceeds.

[11] The *Stranded Affix Filter* proposed by Lasnik (1981) states that a morphologically realised affix must be a syntactic dependent of a morphologically realised category at the surface structure.

Following Mavrogiorgos' (2009) movement proposal for the derivation of proclisis in SMG, it is assumed that clitic pronouns are merged as DPs/Ds in the complement position of the VP. The clitic's phi–features are visible to appropriate probes located higher in the clause structure, therefore the clitic is then attracted by V[12] (or some other verbal v head) to its specifier position. In this way, an A–chain is formed. Simultaneously, an A´–chain is formed with the clitic and an optional EPP (Extended Projection Principle) feature at v*, which bears a familiarity/–focus/old information D feature[13]. The clitic incorporates[14] into the edge of v*, and eventually moves to T incorporated in the v*–V complex. The above assumptions are illustrated in (27), based on Mavrogiorgos' tree structure in (34) (2009:99).

(27) $[_{TP}\,[_{T'}$ DP/Dcl–V–v*–T $[_{v*P}$ (DP/Dcl) $[_{v*'}$ [(V–v*) $[_{VP}$ (V) (DP/Dcl)]]]]]

Returning to Revithiadou's (2006) analysis, the idea advanced in line with Franks (1998) and Franks and Bošković (2001) is that a lower copy of the clitic is available in PF. On the basis of the clause structure adopted for CG (see (26) in chapter 1), repeated below for ease of reference, it is expected that the copy of the DP/Dcl within v*P is available in PF.

(28) $[_{C}$ pu $[_{COp}$ oti/an/na/as $[_{Neg}$ dhen/min $[_{CM}$ tha/na/as $[_{I}$ cl + V...]]]]]

Thus, the structure I assume for examples like (29) is illustrated in (30).

(29) *CHI: (n)a to (p)ki to […].
M CL V CL

(30) $[_{CM}$ (n)a $[_{TP}\,[_{T'}$ to pki $[_{v*P}$ to $[_{v*'}$ [~~pki~~ $[_{VP}$ ~~pki to~~]]]]]

[12] Mavrogiorgos (2009) takes V to be a phase head by inheritance of phi–features from v*.

[13] With regard to the phrasal status of the clitic, Mavrogiorgos assumes that it "moves as an XP, but lands as an X by incorporating into the edge of v*, which is a minimal morpho–syntactic phase transparent at the edge" (2009:98).

[14] See section 3.3 of chapter 3 in Mavrogiorgos (2009) for a detailed discussion of how incorporation takes place.

The above proposal accounts for the realisation of the clitic pronoun in both positions in child data, unlike the adult data, where the PF regulates which of the two copies should be realised.

Based on these facts, it seems that clitic placement in CG is the result of operations that take place at the syntax–phonology interface. The proposal I adopt follows the spirit of proposals in Bošković (2000, 2001) (for cliticisation in Serbo−Croatian) and the basic tenet is that the placement requirement imposed on CG clitics "can be captured in its entirety through a filtering effect of the phonology on the syntax" (2000:105).

Such a proposal differs radically from the Prosodic Inversion approach, put forward by Halpern (1995) and adopted by Condoravdi and Kiparsky (2001) to account for clitic placement in Greek dialects. PI is a radical PF operation. Specifically, it is a PF reordering mechanism whose implementation results in a rightward movement of the clitic to the right edge of its prosodic word (see Halpern 1995, Halpern & Zwicky 1996). Hence, for CG, it is assumed that the clitic is placed pre−verbally by syntax and enclisis derives from the manifestation of PI (Condoravdi & Kiparsky 2001). If we were to explain the attested overgeneralisation of enclisis within such an approach, we should attribute it to the unconstrained application of PI, even in contexts in which this is banned in adult language.

However, there are important drawbacks for such an assumption that have been already discussed in chapter 3 and are briefly recapitulated here. The basic tenet of such an analysis is the existence of a very powerful PF which regulates the re–ordering of the verb and the clitic within the CL–V cluster. However, operations such as movement and linearisation of constituents are standardly perceived as syntactic, hence this is not a desirable assumption theoretically. Moreover, the claim that these operations are syntactic, but triggered by prosodic requirements, is not compatible with the standard assumption that syntax cannot look ahead to the final prosodic structure (Mavrogiorgos 2012).

Within the PF−controlled spell−out of copies approach, the movement and copying of clitic pronouns takes place in syntax, while phonology deletes all but the highest copy, except when the realisation of the latter would lead to a PF

violation (Franks 1998, Franks & Bošković 2001). Specifically, syntax has the following output, upon the manifestation of the clitic movement from v*P to T′:

(31) (function word) CL V CL

Phonology then determines word order "by filtering out certain well–formed syntactic representations" (Bošković 2001:94).

The backbone of such an analysis is Chomsky's (1993) copy theory of movement. Under the original trace theory of movement, movement of an element leaves behind a trace and chains are pronounced in the head position, where phonological information is located. However, Chomsky (1993) proposes that movement leaves behind a copy of the moved element rather than a trace[15]. While the standard assumption is that LF may regulate the realisation of these copies, several authors, including Franks (1998) and Franks and Bošković (2001), proposed that deletion of copies is available in PF as well.

I follow the proposals in Franks (1998) and Franks and Bošković (2001) and assume that a chain is pronounced in the head position and lower copies are deleted in PF, unless the pronunciation in the head position would lead to a PF violation, in which case the lower member of the chain is pronounced and the head is deleted. Moreover, I adopt Franks and Bošković's (2001) perspective and attribute a derivational nature[16] to the clitic–verb linearisation in CG as well.

The next question is how PF regulates the realisation of either the lower or the higher copy and how the overproduction of enclisis at the initial stages of L1A can be captured. There are at least two ways in which the PF−optimisation procedure can be treated, each of which has different implications for children's early production.

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[15] This proposal conforms to the *Inclusiveness Condition* "which restricts syntactic operations to re–arrangements of elements introduced into the structure from the lexicon. The condition prohibits syntax from creating new elements, i.e. from introducing into the derivation elements that were not inserted from the lexicon" (Bošković 2001:98).

[16] Franks and Bošković (2001) suggest a phase–based approach to the multiple spell–out hypothesis on the basis of facts from Bulgarian. In particular, they assume that information is sent from syntax to phonology derivationally, as the structure is being built. Following Chomsky (2000), they assume that information is sent at discrete junctures, the phases, and that CP, but not IP, is a phase.

Firstly, the syntactic output may be filtered out through the constraints for clitic prosodisation in CG, ranked as proposed in Revithiadou (2006) in Optimality theoretic (OT) terms[17]. The constraint ranking is outlined in (14) in chapter 3 and repeated below as (32). Within Revithiadou's approach, at the initial stages of clitic L1 acquisition, during which only enclitics emerge, the hierarchical order of the constraints in child grammar differs from that of the adult grammar. It may be assumed that the constraint requiring rightward directionality to the clitic element, WCON (R), is ranked higher than WCON (L), which requires leftward directionality.

(32) FAITH (Acc), EXH, WCON (L), NON REC >> PCON, WCON (R)

Alternatively, clitic placement may be regulated by some PF filters such as those proposed by Bošković (2000/2001) for cliticisation in Serbo–Croatian. Bošković proposes that Serbo–Croatian clitics undergo syntactic movement and phonology places them in the second position of their I–phrase (2000:114–115). In particular, he suggests that Serbo–Croatian clitics are suffixes[18] within their I–phrase (Selkirk 1995) and that they are specified as such in the lexicon. This specification is represented by the following PF filters: a. #_ and b. suffix (Bošković 2000:107). The former indicates that clitics appear in the initial part within their domain of cliticisation (I–phrase) and the latter indicates that they are suffixes, hence right–adjacent to their host. Syntactic outputs that violate this lexical requirement of Serbo–Croatian clitics are filtered out in PF.

Extending Bošković's (2000, 2001) analysis, one can account for cliticisation in CG as follows: the Tobler–Mussafia effect is assumed to be a second position effect whose domain of application is the I–phrase (Revithiadou & Spyropoulos 2008[19]). The overgeneralisation of enclitics in early CG can then

[17] The use of OT constraints within the context of generative approaches is not such a novelty. Franks and King (2000) give an account of cliticisation in Serbo–Croatian in which syntax is generative, but PF is regulated by OT constraints.

[18] Crucially, Bošković does not take clitics to be affixes. Instead, he uses the term suffix "to indicate a phonologically weak element that follows its host" (2000:104, footnote 29).

[19] Revithiadou and Spyropoulos (2008) consider CG clitics second position (2P) elements in the sense that they appear in the second position of their I–phrase.

be attributed to a misanalysis of the PF filters that regulate clitic placement. In particular, children assume that clitics are verbal suffixes rather than suffixes to the initial constituent within their I–phrase and they always place them post–verbally. What needs to be stressed is that like Bošković, I do not assume that clitics are affixes (2000:104, footnote 29). Instead, I take the term suffix to indicate a phonologically weak element that prosodifies in the preceding element within the same I–phrase.

The acquisition data do not provide evidence in favour of one or the other approach. However, corroborative evidence for the second position status of CG clitics (within their I–phrase) comes from the diachronic development of clitic pronouns in Greek (Pappas 2001; 2004, Revithiadou & Spyropoulos 2008). Revithiadou and Spyropoulos indicate that Greek clitics in the Late Classical and early Post–Classical period (4th–2nd c. BC) had to adhere to the Wackernagel Law and occupy the 2nd position in the clause. The relaxation of this Law led to the emergence of two subsystems, one of which retained the 2P status of clitic pronouns. However, the domain of application of second position restrictions was no longer the clause but instead the phonological phrase. This subsystem was the ancestor of the CG grammar. A standard assumption that I adopt is that the Tobler–Mussafia effect is pertinent to the syntax–phonology interface, and hence the domain of application of phonological operations that regulate clitic placement in contemporary CG could be none other than the I–phrase, as suggested in Revithiadou and Spyropoulos (2008). Within such an analysis, phonology determines the 2P effect through filtering out an over–generating syntax.

CONCLUDING REMARKS

The current study has provided evidence for an interesting phenomenon attested in early CG, namely the over–production of the enclisis pattern, on the basis of experimental as well as spontaneous data, both cross–sectional and longitudinal. This target–deviant pattern is attested in children aged 2;6 to 3;0 with single clitics or clitic clusters, and in derivationally more complex structures, such as CD and CLLD. Three developmental stages have been identified in clitic L1A in CG: the first is characterised by the use of the enclisis pattern alone in all syntactic contexts, the second by the manifestation of post–verbal clitic placement in enclisis contexts, pre– and post–verbal placement in proclisis contexts, as well as sparse occurrences of double realisation of the clitic pronoun (both pre– and post–verbally), and the last by target–like clitic placement in both enclisis and proclisis contexts.

From a theoretical perspective, the over–production of the enclisis pattern is explained within Revithiadou's (2006) account of clitic placement in CG. The movement of CG clitics leaves behind copies, which are available in PF. Phonology deletes all but the highest, unless its realisation would lead to a PF violation (Franks 1998, Franks & Bošković 2001). Following ideas in Bošković (2000, 2001), I attribute the Tobler–Mussafia effect in CG to the second position status of CG clitics within their I–phrase, while I locate the domain of cliticisation in CG at the syntax–phonology interface.

The outcome of the current study has an important implication for the categorisation of clitic languages from the perspective of L1 acquisition. Following Mavrogiorgos' (2012) tri–partition with respect to the types of clitic languages, clitic placement in finiteness–sensitive languages, including Catalan, Italian, Romanian, Spanish and Standard Modern Greek among others, is target–like from the onset of L1A. With regard to languages exhibiting the Tobler–Mussafia effect, like CG and European Portuguese, a different picture emerges. The current study has offered ample evidence for the over–production of the enclisis pattern in all syntactic contexts at the onset of L1A in CG, as well as for the double realisation of the clitic pronoun both pre– and post–verbally in

proclisis contexts. It has been shown that similar target–deviant structures are produced by young EP–speaking children as well (Lobo & Costa 2012). On the basis of this divergence, I attribute the placement errors in the clitic production of CG– and EP–speaking children to the type of the clitic language they acquire. In other words, while children acquiring Tobler–Mussafia type languages manifest clitic misplacement at the onset of L1A, children acquiring finiteness–sensitive languages exhibit adult–like clitic placement from the onset. With respect to languages exhibiting second position restrictions Serbo–Croatian is a representative example. Here there is some evidence for unraised clitic pronouns in 3–year–olds (Ilic & Ud Deen 2004); no data are available for earlier stages of clitic L1A to test whether young children fail to produce clitic pronouns in their raised positions.

The existence or absence of clitic misplacement in early languages is contingent on the type of clitic language being acquired. A direct comparison of the acquisition process in CG and SMG, two varieties sharing the morphological paradigm of pronominal clitics, while representing a different type of clitic language, is indicative in this respect. Early CG exhibits target–deviant patterns including misplacements and realisations of multiple copies of the clitic pronoun, while early SMG patterns with adult SMG with respect to clitic placement. The target–deviant productions in early CG are attributed to the Tobler–Mussafia properties of the variety being acquired.

LIMITATIONS OF THE CURRENT STUDY – IMPLICATIONS FOR FUTURE RESEARCH

The present study has used different methodologies to investigate the L1A of clitic placement in CG on the basis of data from 58 children. This is the largest database for the study of clitic placement in enclisis and proclisis contexts in CG–speaking children so far. This study aimed to define the age range within which non–adult clitic placement is attested in early CG, and thus children aged 2;6 to 4 were recruited. One important outcome of the present study is that it has identified that target–deviant patterns occur in the data of children whose age falls within the age range 2;6 to 3;0 and in proclisis contexts alone. This outcome points both to limitations of this study and to avenues for further research.

a) First, the overall number of children falling within the critical age was, obviously, a subset of the total tested: 18 out of the 50 participants in the experiment and 6 out of the 8 participants of the spontaneous speech study belong to this age group. A follow–up study should now focus on this particular age group and enlarge the database for it.

b) Having gained an overall picture of both enclisis and proclisis contexts, a follow–up study could now concentrate on exploring in detail the different proclisis contexts. This should include an experimental design especially developed for the elicitation of negative utterances, very few of which were obtained with the method used.

If the conclusion of the current study is on the right track and the Tobler–Mussafia properties of the language being acquired do indeed result in target–deviant productions, then similar phenomena are expected in other languages exhibiting Tobler–Mussafia properties. Apart from EP, in which clitic misplacement has already been attested (Lobo & Costa 2012), such a phenomenon is expected to occur in early Galician and Berber, another language in which clitics are subject to position restrictions similar to those of CG and EP (Petinou & Terzi 2002:23, footnote 19). It would certainly be fruitful to extend the analysis to the L1 acquisition of languages of this type.

REFERENCES

Agouraki, Y. (1991). A Modern Greek complementizer and its significance for universal grammar. *UCL Working Papers in Linguistics* 3: 1–24.

Agouraki, Y. (1993). Spec–Head Licensing: The Scope of the Theory. Unpublished PhD Dissertation, University College London.

Agouraki, Y. (2001). The position of clitics in Cypriot Greek. In: Ralli, A., Joseph, B. & M. Janse (eds.), *Proceedings of the First International Conference of Modern Greek Dialects and Linguistic Theory*, 1–18. University of Patras.

Agouraki, Y. (2010). It–clefts and stressed operators in the preverbal field of Cypriot Greek. *Lingua* 120: 527–554.

Aguado, G. (1988). Valoracion de la competencia morfosintactica en el niño de dos años y medio. *Infancia y Aprendizaje* 43: 73–95.

Alexiadou, A. (1994). Issues in the syntax of Adverbs. Unpublished PhD Dissertation, University of Potsdam.

Alexiadou, A. (1997). *Adverb Placement: a Case Study in Antisymmetric Syntax*. Amsterdam: John Benjamins.

Alexiadou, A. & E. Anagnostopoulou (1998). Parametrizing Agr: word order, V–movement and EPP–checking. *Natural Language and Linguistic Theory* 16: 491–539.

Amery, H. & S. Cartwright (2009). *First Hundred Words in English*. London: Usborne Publishing.

Anagnostopoulou, E. (1994). Clitic Dependencies in Modern Greek. Unpublished PhD Dissertation, University of Salzburg.

Anagnostopoulou, E. (2006). Clitic Doubling. In: Everaert, M. & H. van Riemsdijk (eds.), *The Blackwell Companion of Syntax*, 519–581. Oxford: Blackwell.

Antelmi, D. (1992). Uipotesi Maturazionale Nel Vacquisizione del Linguaggio. Indagine Longitudinale su una Bambina Italiana. Unpublished PhD Dissertation, University of Venice/ Padua.

Arvaniti, A. (2010). Linguistic practices in Cyprus and the emergence of Cypriot Standard Greek. *Mediterranean Language Review* 17: 15–45.

Avram, A. (1986). Sandhi phenomena in Romanian. In: Henning, A. (ed.), *Sandhi Phenomena in the Languages of Europe*, 551–574. Berlin/New York/Amsterdam: Mouton de Gruyter.

Avram, L. (1999). Clitic Omission in Child Romanian. Ms. University of Bucharest/University of Potsdam.

Avram, L. (2000). From possessive clitics to object clitics: a unifying analysis. In: Tasmowski L. (coord.), *The Expression of Possession in Romance and Germanic Languages*, 83–100. Cluj–Napoca: Clusium.

Avram, L. & M. Coene (2007). Object Clitics as Last Resort. Implications for language acquisition. In: Baauw, S., van Kampen J. & M. Pinto (eds.), *The Acquisition of Romance Languages. Selected papers from The Romance Turn II*, 7–26. Utrecht: LOT.

Babyonyshev, M. & S. Marin (2006). Acquisition of Pronominal Clitics in Romanian. *Catalan Journal of Linguistics* 5: 17–44.

Benincà, P. & G. Cinque (1993). Su alcune differenze tra enclisi e proclisi. In *Omaggio a Gianfranco Folena*, 2313–2326. Editoriale Programma, Padova.

Bermúdez–Otero, R. & A. R. Luís. (2009). Cyclic domains and prosodic spans in the phonology of European Portuguese functional morphs [Handout]. Paper presented at the "Old World Conference in Phonology 6" (Edinburgh, 24 January 2009). (downloadable at: http://www.bermudez-otero.com/bermudez-otero&luis.pdf)

Beukema, F. & P. Coopmans (1989). A Government–Binding Perspective on the Imperative in English. *Journal of Linguistics* 25: 417–436.

Bonet, E. (1994). The Person–Case constraint: A morphological approach. *The Morphology–Syntax Connection, MIT Working Papers in Linguistics* 22, 33–52.

Bošković, Ž. (2000). Second Position Cliticization. Syntax and / or Phonology? In: Beukema, F. & M. den Dikken (eds.), *Clitic Phenomena in European Languages*, 71–119. Amsterdam / Philadelphia: John Benjamins.

Bošković, Ž. (2001). *On the Nature of the Syntax–Phonology Interface: Cliticization and Related Phenomena*. Amsterdam, London, New York: Elsevier Science.

Cardinaletti, A. & M. Starke (1999). The typology of structural deficiency: A case study of the three classes of pronouns. In: van Riemsdijk H. (ed.), *Clitics in the languages of Europe*, 145–233. Berlin: Mouton de Gruyter.

Carnie, A., Harley, H. & E. Pyatt (2000). VSO Order as Raising Out of IP? Some Evidence from Old Irish. In Carnie, A. & E. Guilfoyle (eds.), *The Syntax of Verb Initial Languages*, 39–59. Oxford University Press.

Chatzikyriakidis, S. (2010). Clitics in 4 Dialects of Modern Greek: A Dynamic Account. Unpublished PhD Dissertation, King's College, London.

Chatzikyriakidis, S. (2012). A dynamic account of clitic positioning in Cypriot Greek. *Lingua* 112: 642–672.

Chomsky, N. (1991). Some notes on economy of derivation and representation. In: Freidin, R. (ed.), *Principles and parameters in comparative grammar*, 417–454. Cambridge, MA: MIT Press.

Chomsky, N. (1993). A Minimalist Program for Linguistic Theory. In: Hale, K. & S. J. Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 1–52. Cambridge, MA: MIT Press.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, N. (1998). Minimalist inquiries: the framework. Ms. MIT.

Chomsky, N. (2000). Minimalist inquiries: The framework. In: Martin, R., Michaels, D. & J. Uriagereka (eds.), *Step by step: essays on minimalist syntax in honor of Howard Lasnik*, 89–155. Cambridge, MA: MIT Press.

Chondrogianni, V. (2008). The acquisition of determiners and clitic pronouns by child and adult L2 learners of Greek. Unpublished PhD Dissertation, University of Cambridge.

Cinque, G. (1990). *Types of A–Dependencies*. Cambridge, MA: The MIT Press.

Condoravdi, C. & P. Kiparsky (2001). Clitics and clause structure. *Journal of Greek Linguistics* 2, 1–40.

Costa, J. & M. Lobo (2007a). Clitic omission, null objects or both in the acquisition of European Portuguese? In: Baauw, S., Drijkoningen, F. & M.

Pinto (eds.), *Romance Languages and Linguistic Theory 2005*, 59–72. Amsterdam: John Benjamins.

Costa, J. & M. Lobo (2007b). Complexidade e omissão de clíticos: o caso dos reflexos. *XXII Encontro Nacional da Associação Portuguesa de Linguística. Textos Seleccionados*, 303–313. Lisboa: APL.

Costa, J., Lobo, M., Carmona, J. & C. Silva (2008). Clitic omission in European Portuguese: correlation with null objects? In: Gavarró A. & M. J. Freitas (eds.), *Language acquisition and development: Proceedings of GALA 2007*, 133–143. Newcastle–upon–Tyne: Cambridge Scholars Publishing.

Costa, J. & M. Lobo (2009). Clitic omission in the acquisition of European Portuguese: Data from comprehension. In: Pires, A. & J. Rothman (eds.), *Minimalist inquiries into child and adult language acquisition: case studies across Portuguese*, 63–84. Berlin/ New York: Mouton de Gruyter.

Duarte, I., Matos, G. & I. H. Faria (1995). Specificity of European Portuguese Clitics in Romance. In: Faria, I. H. & M. J. Freitas (eds.), *Studies on the Acquisition of Portuguese*, 129–154. Lisboa: APL.

Duarte, I. & G. Matos (2000). Romance Clitics and the Minimalist Program. In Costa, J. (ed.), *Portuguese Syntax. New Comparative Studies*, 116–142. Oxford University Press.

Eisenbeiss, S. (2009). Contrast is the Name of the Game. Contrast–Based Semi–Structured Elicitation Techniques for Studies on Children's Language Acquisition. *Essex Research Reports in Linguistics* 57 (7). Department of Language and Linguistics, University of Essex, Colchester, UK. (downloadable at: http://www.essex.ac.uk/linguistics/publications/errl/errl57-7.pdf)

Ferguson, C.A. (1959). Diglossia. *Word* 15: 325–340. [Reprinted in Paulston, C.B. & G.R. Tucker (eds.). 2003. *Sociolinguistics: The Essential Readings*, 345–358. Oxford: Blackwell]

Ferguson, S. & E. Groat (1995). Defining Shortest Move. Ms. Harvard University.

Fontana, J. (1996). Phonology and Syntax in the Interpretation of the Tobler–Mussafia Law. In: Halpern, A. & A. Zwicky (eds.), *Approaching Second.*

Second Position Clitics and Related Phenomena, 41–83. Stanford, CA: CSLI Publications.

Franks, S. (1998). Clitics in Slavic. Position paper presented at the "Comparative Slavic Morphosyntax" Workshop, Indiana University (Spencer, Indiana, 5–7 June 1998). (downloadable at http://www.indiana.edu/~slavconf/linguistics/frnks.pdf)

Franks, S. (2000). Clitics at the interface: An introduction to clitic phenomena in European languages. In: Beukema, F. & M. den Dikken (eds.), *Clitic Phenomena in European Languages*, 1–46. Amsterdam: John Benjamins.

Franks, S. & T. King (2000). *A handbook of Slavic clitics*. New York: Oxford University Press.

Franks, S. & Ž. Bošković (2001). An Argument for Multiple Spell–Out. *Linguistic Inquiry* 32 (1): 174–183.

Grohmann, K.K., Panagiotidis, P. & S. Tsiplakou (2006). Properties of Wh–question formation in Cypriot Greek. In: Janse, M., Joseph, B. and A. Ralli (eds.), *Proceedings of the Second International Conference of Modern Greek Dialects and Linguistic Theory*, 83–98. University of Patras.

Grohmann, K.K. (2011). Some directions for the systematic investigation of the acquisition of Cypriot Greek: A new perspective on production abilities from object clitic placement. In: Rinke E. & T. Kupisch (eds.), *The Development of Grammar: Language acquisition and diachronic change. In honour of Jürgen M. Meisel (Hamburg Studies on Multilingualism 11)*, 179–203. Amsterdam: John Benjamins.

Grohmann, K.K. & E. Papadopoulou (2011). Question(able) Issues in Cypriot Greek. *Linguistic Analysis* 37 (1–2): 8–38.

Grohmann, K.K., Theodorou, E., Pavlou, N., Leivada, E., Papadopoulou, E. & S. Martínez–Ferreiro (2012). The Development of Object Clitic Placement in Cypriot Greek and the Romance Connection. In: Ferré, S., Prévost, P., Tuller, L. & R. Zebib (eds.), *Selected Proceedings of the Romance Turn IV Workshop on the Acquisition of Romance Languages*, 128–152. Newcastle–upon–Tyne: Cambridge Scholars Publishing.

Grüter, T. (2006). Object clitics and null objects in the acquisition of French.

Unpublished PhD Dissertation, McGill University, Montreal.

Guasti, M.T. (1993/1994). Verb Syntax in Italian Child Grammar: Finite and Nonfinite Verbs. *Language Acquisition* 3 (1): 1–40.

Haegeman, L. (1996). Root Infinitives, Clitics and Truncated Structures. In: Clahsen H. (ed.), *Generative Perspectives on Language Acquisition*, 271–308. Amsterdam/Philadelphia: John Benjamins.

Halle, M. & A. Marantz. (1993). Distributed Morphology and the Pieces of Inflection. In: Hale, K. & S. J. Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 111–176. Cambridge, MA: MIT Press.

Halpern, A. (1995). *On the Placement and Morphology of Clitics*. Stanford, California: CSLI Publications.

Halpern, A. & A. Zwicky (1996). *Approaching second: second position clitics and related phenomena*. Stanford, California: CSLI Publications.

Hamann, C., Rizzi, L. & U. Frauenfelder (1996). On the Acquisition of Subject and Object Clitics in French. In: Clahsen H. (ed.), *Generative Perspectives on Language Acquisition*, 309–334. Amsterdam/Philadelphia: John Benjamins.

Heim, I. & A. Kratzer (1998). *Semantics in generative grammar*. Oxford: Blackwell.

Hickey, T. (1991). Mean length of utterance and the acquisition of Irish. *Journal of Child Language* 18: 553–569.

Hiramatsu, K. (1997). A production/judgment asymmetry in children's negative questions. Ms. University of Connecticut, Storrs.

Hiramatsu, K. (2000a). What did Move didn't erase? In: Braze, D., Kudo, Y. & K. Hiramatsu (eds.), *UConn Working Papers in Linguistics* 10, 75–110. Department of Linguistics, University of Connecticut, Storrs.

Hiramatsu, K. (2000b). Accessing linguistic competence: Evidence from children's and adults' acceptability judgments. Unpublished PhD Dissertation, University of Connecticut, Storrs.

Holton, D. Mackridge, P. & I. Philippaki–Warburton (1997). Greek: *A Comprehensive Grammar of the Modern Language*. London/New York:

Routledge.

Horrocks, G.C. (1997). *Greek: a history of the language and its speakers*. London: Longman.

Hyams, N. (2002). Clausal Structure in Child Greek: A reply to Varlokosta, Vainikka and Rohrbacher and a reanalysis. *The Linguistic Review* 19: 225–269. (also downloadable at http://www.linguistics.ucla.edu/people/hyams/hyams.htm)

Iatridou, S. (1994). Comments on the Paper by Roberts. In: Lightfoot, D. & N. Hornstein (eds.), *Verb Movement*, 243–60. Cambridge: CUP.

Ilic, T. & K. Ud Deen (2004). Object raising and cliticization in Serbo–Croatian child language. In: van Kampen, J. and S. Baauw (eds.), *Proceedings of GALA 2003 (Generative Approaches to Language Acquisition) Volume 1*, 235–243. Utrecht: LOT.

Ioannidou, E. (2009). Using the 'improper' language in the classroom: the conflict between language use and legitimate varieties in education. Evidence from a Greek Cypriot classroom. *Language and Education* 23 (3): 263–278.

Ioannidou, E. & A. Sophocleous (2010). "Now, is this how we are going to say it?" Comparing teachers' language practices in primary and secondary state education in Cyprus. *Linguistics and Education* 21: 298–313.

Janse, M. (1998). Cappadocian clitics and the syntax-morphology interface. In Joseph, B., Horrocks, G.C. and I. Philippaki–Warburton (eds.), *Themes in Greek Linguistics II*, 257–281. Philadelphia: Benjamins.

Kayne, R.S. (1975). *French Syntax. The Transformational Cycle*. Cambridge, MA: MIT Press.

Kayne, R.S. (1994). *The Antisymmetry of Syntax*. Cambridge, MA: The MIT Press.

Laka, I. (1990). Negation in syntax: On the nature of functional categories and projections. Unpublished PhD Dissertation, MIT.

Lasnik, H. (1981). Restricting the theory of transformations. In: Hornstein, N. and D. Lightfoot (eds.), *Explanation in linguistics: the logical problem of language acquisition*, 152–73. London: Longman.

Leivada, E., Mavroudi, P. & A. Epistithiou (2010). (Meta)language(s) or

bidialectism? Acquisition of clitic placement by mainland Greeks, Greek Cypriots and biethnics in the diglossic context of Cyprus. In: Botinis, A. (ed.), *Proceedings of the ISCA Tutorial and Research Workshop on Experimental Linguistics 2010*, 97–100. Athens: University of Athens.

Liberman, M & A. Prince (1977). On Stress and Linguistic Rhythm. *Linguistic Inquiry* 8 (2): 249–336.

Lobo, M. & J. Costa (2012). On the acquisition of clitic placement in European Portuguese. Paper presented at the CYCLIA Workshop on the Acquisition of Clitics (Nicosia, Cyprus, May 25–26 2012).

MacWhinney, B. (2000). The CHILDES Project: Tools for Analyzing Talk. 3rd Edition. Mahwah, NJ: Lawrence Erlbaum Associates.

MacWhinney, B. (2012a). The CHILDES Project: Tools for Analyzing Talk – Electronic Edition. Part 1: The CHAT Transcription Format. (downloadable at http://childes.psy.cmu.edu/manuals/chat.pdf)

MacWhinney, B. (2012b). The CHILDES Project: Tools for Analyzing Talk – Electronic Edition. Part 2: The CLAN Programs. (downloadable at http://childes.psy.cmu.edu/manuals/clan.pdf)

Malakoff, M. E., Mayes, L. C., Schottenfeld, R. & S. Howell (1999). Language Production in 24–Month–Old Inner–City Children of Cocaine–and–Other–Drug–Using Mothers. *Journal of Applied Developmental Psychology* 20 (1): 159–180.

Manzini, M.R. & L. Savoia (1999). The Syntax of Middle–reflexive and Object Clitics: A Case of Parametrization in Arberërsh Dialects. In: Mandalà, M. (ed.), *Studi in Onore di Luigi Marlekaj*, 328–383. Bari: Adriatica.

Marin, S. (2004). Pronominal Clitic Positioning is Morpho–Phonological: Evidence from Romanian Adult and Acquisition Data. Ms. Yale University.

Marinis, T. (2000). The acquisition of clitic objects in Modern Greek: Single Clitics, Clitic Doubling, Clitic Left Disclocation. In *ZAS Papers in Linguistics* 15, 259–281. Berlin: ZAS.

Mastropavlou, M., Petinou, K. & I.M. Tsimpli (2014). Morpho–phonology and compensation: tense marking and object clitics in Greek and Cypriot–

Greek children with SLI. Ms. University of Ioannina, Cyprus University of Technology and Aristotle University of Thessaloniki.

Mavrogiorgos, M. (2009). Proclisis and Enclisis in Greek. Unpublished PhD Dissertation, University of Cambridge.

Mavrogiorgos, M. (2010). *Clitics in Greek: a minimalist account of proclisis and enclisis*. Amsterdam: John Benjamins.

Mavrogiorgos, M. (2012). Enclisis at the syntax–PF interface. Ms. University of Ulster.

Mussafia, A. (1886). Una particolarità sintattica della lingua italiana dei primi secoli. In: Ascoli, G. I. et al. *Miscellanea di filologia e linguistica. In memoria di Napoleone Caix e Ugo Angelo Canello*, 255–261. Firenze: Successori Le Monnier.

Mussafia, A. (1898). Enclisi o proclisi del pronome personale atono qual oggeto. *Romania* 27 (195): 145–146.

Pancheva, R. (2005). The Rise and Fall of Second–Position Clitics. *Natural Language and Linguistic Theory* 23 (1): 103–167.

Pappas, P. A. (2001). Weak Object Pronoun Placement in Later Medieval and Early Modern Greek. Unpublished PhD Dissertation, The Ohio State University.

Pappas, P. A. (2004). *Variation and Morphosyntactic Change in Greek: From clitics to affixes*. Hampshire: Palgrave Macmillan.

Pappas, P. A. (2011). A magnitude estimation test for Cypriot Greek clitics. Paper presented at GeSuS (Prague, Czech Republic, May 26–28 2011).

Parodi, T. & I. M. Tsimpli (2005). 'Real' and apparent optionality in second language grammars: finiteness and pronouns in null operator structures. *Second Language Research* 21 (3): 250–285.

Pavlou, N. (2009). Flavours of mbu in Cypriot Greek. Paper presented at the 9th International Conference of Greek Linguistics, University of Chicago (October 29–31, 2009).

Pavlou, P. & A. Papapavlou (2004). Issues of dialect use in education from the Greek Cypriot perspective. *International Journal of Applied Linguistics*, 14(2): 243–258.

Petinou, K. & A. Terzi (2002). Clitic Misplacement Among Normally Developing Children and Children With Specific Language Impairment and the Status of Infl Heads. *Language Acquisition* 10 (1): 1–28.

(Philippaki–)Warburton, I. (1977): Modern Greek clitic pronouns and the 'surface–structure constraints' hypothesis. *Journal of Linguistics* 13: 259–281.

Philippaki–Warburton, I. (1987). The theory of empty categories and the pro–drop parameter in Modern Greek. *Journal of Linguistics* 23: 289–318.

Philippaki–Warburton, I. (1998). Functional categories and Modern Greek syntax. *The Linguistic Review* 15: 159–186.

Philippaki–Warburton, I. & V. Spyropoulos (1999): On the boundaries of inflection and syntax: Greek pronominal clitics and particles. In: Booij, G. & J. Van Marle (eds.), *The Yearbook of Morphology 1998*, 45–72. Dordrecht: Kluwer.

Philippaki–Warburton, I. & V. Spyropoulos (2004). A change of mood: The development of the Greek mood system. *Linguistics* 42, 523–549.

Piñón, C. (1993). SigmaP and Hungarian. *WCCFL* 11:388–404.

Prince, A. & P. Smolensky (1993). Optimality Theory: constraint interaction in Generative Grammar. Report no. RuCCS–TR–2, Rutgers University Center for Cognitive Science, New Brunswick, NJ.

Ralli, A. (2006). Syntactic and morphosyntactic phenomena in Modern Greek dialects: The state of the art. *Journal of Greek Linguistics* 7: 121–159.

Reinhart, T. (1999). The processing cost of reference set computations: guess patterns in acquisition. OTS Working papers in Linguistics.

Revithiadou, A. (2006). Prosodic filters on syntax: an interface account of second position clitics. *Lingua* 116: 79–111.

Revithiadou, A. (2008). A cross–dialectal study of cliticization in Greek. *Lingua* 118: 1393–1415.

Revithiadou, A. & V. Spyropoulos (2008). Greek object clitic pronouns: A typological survey of their grammatical properties. *STUF* 61, 39–53.

Rivero, M. L. & A. Terzi (1995). Imperatives, V–Movement and Logical Mood. *Journal of Linguistics* 31 (2), 301–332.

Rizzi, L. (1993/94). Some notes on linguistic theory and language development: The case of root infinitives. *Language Acquisition* 3 (4), 371–393.

Rizzi, L. (1997). The fine structure of the left periphery. In: Haegeman, L. (ed.), *Elements of grammar: Handbook in generative syntax*, 281–337. Dordrecht: Kluwer Academic Publishers.

Roberts, I. (2010). *Agreement and Head Movement: Clitics, Incorporation, and Defective Goals*. Cambridge, MA: MIT Press.

Roussou, A. (1991). Nominalized clauses in the syntax of Modern Greek. *UCL Working Papers* 3.

Roussou, A. (1994). The Syntax of Complementisers. Unpublished PhD Dissertation, University College London.

Roussou, A. (2000). On the left periphery. Modal particles and complementisers. *Journal of Greek Linguistics* 1: 65–94.

Schaeffer, J. (1997). Direct object scrambling in Dutch and Italian child language. *UCLA Dissertations in Linguistics 17*.

Schaeffer, J. C. (2000). *The acquisition of direct object scrambling and clitic placement. Syntax and Pragmatics*. Amsterdam/Philadelphia: John Benjamins.

Selkirk, E.O. (1995). The prosodic structure of function words. In: Beckman, J., Walsh Dickey, L. and S. Urbanczyk (eds.), *University of Massachusetts Occasional Papers in Linguistics 18: Papers on Optimality Theory*, 439–469. Amherst: University of Massachusetts.

Silva, C. (2008). Assimetrias na aquisição de clíticos diferenciados em português europeu. Unpublished MA Dissertation. Universidade Nova de Lisboa.

Simeonidis, C. P. (2006). History of the Cypriot Greek Dialect [in Greek]. Nicosia: Holy Monastery of Kykkos Centre of Research.

Soares, C. (2006). La syntaxe de la peripherie gauche en Portuguais Europeen et son acquisition. PhD Dissertation, University of Paris 8.

Sportiche, D. (1996). Clitic Constructions. In: Rooryck, J. & L. Zaring (eds.) *Phrase Structure and the Lexicon*, 213–276. Dordrecht: Kluwer Academic Publishers.

Stephany, U. (1997). The Acquisition of Greek. In: Slobin, D.I. (ed.), *The*

crosslinguistic study of language acquisition. Volume 4, 183–334. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Terzi, A. (1999a). Clitic combinations, their hosts and their ordering. *Natural Language and Linguistic Theory* 17: 85–121.

Terzi, A. (1999b). Cypriot Greek clitics and their positioning restrictions. In: Alexiadou, A., Horrocks, G. & M. Stavrou (eds.), *Studies in Greek Syntax*, 227–240. Dordrecht: Kluwer Academic Publishers.

Theophanopoulou–Kontou, D. (1986/1987). Empty categories and clitics in Modem Greek: The object case. *Glossologia* 5/6:41–68.

Tobler, A. (1875/1912). [Review of] Jules le Coultre, De l'ordre des mots dans Crestien de Troyes. Extrait du programme de Pâques 1875 du Collége Vitzthum. Dresde 1875. *Göttingische gelehrte Anzeigen* 2 (34): 1057–1082. (Republished in: Tobler, A. (ed.) *Vermischte Beiträge zur französischen Grammatik* 5, 395– 415. Leipzig: S. Hirzel.)

Tsakali, V. & K. Wexler (2003). The Acquisition of Person Case Constraint. Paper presented at the 19th International Symposium on Theoretical & Applied Linguistics, Aristotle University of Thessaloniki (Thessaloniki, Greece, 3–5 April 2009).

Tsakali, V. & K. Wexler (2004). Why Children Omit Clitics in Some Languages but not in Others: New Evidence from Greek. In: van Kampen, J. and S. Baauw (eds.), *Proceedings of GALA 2003 (Generative Approaches to Language Acquisition) Volume* 2, 493–504. Utrecht: LOT.

Tsakali, P. (2006). The Syntax and Acquisition of Pronominal Clitics: a Crosslinguistic Study with Special Reference to Modern Greek. Unpublished PhD Dissertation, University College London.

Tsimpli, I. M. (1992/1996). *The Prefunctional Stage of First Language Acquisition: A crosslinguistic Study.* PhD Dissertation, University College London. New York / London: Garland.

Tsimpli, I. M. (1995). Focusing in Modern Greek. In: Kiss, K. É. (ed.), *Discourse Configurational Languages*, 176–206. Oxford: OUP.

Tsimpli, I. M. (1999). Null operators, clitics and identification: a comparison between Greek and English. In: Alexiadou, A., Horrocks, G. & M. Stavrou

(eds.), *Studies in Greek Syntax*, 241–262. Dordrecht: Kluwer Academic Publishers.

Tsimpli, I. M. & S. Stavrakaki (1999). The effects of a morpho–syntactic deficit in the determiner system: The case of a Greek SLI child. *Lingua* 108 (1): 31–85.

Tsiplakou, S., Panagiotidis, P. & K.K. Grohmann (2005). Properties of Cypriot Greek wh–question formation. Paper presented at the "7th International Conference on Greek Linguistics" (York, UK, 8–10 September 2005).

Tsoulas, G. (1993). Remarks on the structure and interpretation of na–clauses. *Studies in Greek Linguistics* 14: 191–206.

Tzakosta, M. (2003). The acquisition of clitics in Greek: A phonological perspective. In: Agbayani, B., Koskinen, P. and V. Samiian (eds.), *Proceedings of the 31st West Coast Conference of Linguistics*. Vol. 14. Department of Linguistics, California State University at Fresno.

Tzakosta, M. (2004a). The acquisition of the clitic group in Greek. *Proceedings of the 24th Annual Meeting of Greek Linguistics*, 693–704. Thessaloniki: Aristotle University of Thessaloniki.

Tzakosta, M. (2004b). The enclisis–proclisis asymmetry in the acquisition of clitics in Greek. In: Katsimali, G., Kalokairinos, A., Anagnostopoulou, E. and I. Kappa (eds.) *Proceedings of the 6th International Conference in Greek Linguistics. Vol. 1*, 91–98. Rethymno: University of Crete.

Uriagereka, J. (1995). Aspects of the Syntax of Clitic Placement in Western Romance. *Linguistic Inquiry* 26 (1): 79–123.

Varlokosta, S., Vainikka, A. & B. Rohrbacher (1998). Functional projections, markedness, and "root infinitives" in early child Greek. *The Linguistic Review* 15: 187–207.

Veloudis, I. & I. Philippaki–Warburton (1983). The subjunctive in Modern Greek [in Greek]. *Studies in Greek Linguistics* 4: 151–168.

Vlachos, C. (2010). Wh–in–situ: The Case of Greek. In Torrens, V., Escobar, L., Gavarró, A. and J. Gutiérrez (eds.), *Movement and Clitics*, 85–113. Newcastle–upon–Tyne: Cambridge Scholars Publishing.

Wexler, K. (1998). Very early parameter setting and the unique checking

constraint: A new explanation of the optional infinitive stage. *Lingua* 106: 23–79.

Wexler, K., Gavarró, A. & V. Torrens (2004). Feature checking and object clitic omission in child Catalan and Spanish. In: Bok–Bennema, R., Hollebrandse, B., Kampers–Manhe, B. & P. Sleeman (eds.), *Romance Languages and Linguistic Theory 2002*, 253–268. Amsterdam/Philadelphia: John Benjamins.

Yiakoumetti, A., Evans, M. & E. Esch (2005). Language Awareness in a Bidialectal Setting: The Oral Performance and Language Attitudes of Urban and Rural Students in Cyprus. *Language Awareness* 14 (4): 254−260.

Experimental Material: Picture–Based Task

CONTENT REMOVED FOR COPYRIGHT REASONS

(1) EXP: Ti theli na kami to koritsaki to kadhro?
"What does the girl want to do with the frame?"

CHI:	Na	to	vali / kremasi (sto diho).
	M	CL.NEU.ACC	put / hang–3S on–the wall

[Elicited Clause: *na*–clause]

CONTENT REMOVED FOR COPYRIGHT REASONS

(2) EXP: Ti ekamen o shilos tis koruas?
"What did the dog do to the girl?"
CHI: Epkjasen tis tin klatsa (tis).
Took–3S CL.FEM.DAT the sock POSS
[Elicited Clause: root clause]

(3) EXP: Ti ekamen i korua tin alin klatsa?
"What did the girl do with the other sock?"
CHI: Eforisen tin.
Put on–3S CL.FEM.ACC
[Elicited Clause: root clause]

CONTENT REMOVED FOR COPYRIGHT REASONS

(4) EXP: Ti enna kami o papas tu moru?
"What is dad going to do to the child?"

CHI:	Enna	tu	forisi	to	triko	(tu).
	M	CL.NEU.DAT	put on–3S	the	jumper	POSS

[Elicited Clause: *enna*–clause]

CONTENT REMOVED FOR COPYRIGHT REASONS

(5) EXP: Ti ekamen i mama to pkjato?
"What did mum do with the plate?"

CHI:	Evalen	to	pano.
	Put–3S	CL.NEU.ACC	up

[Elicited Clause: root clause]

CONTENT REMOVED FOR COPYRIGHT REASONS

(6) EXP: Ti theli na kami to pedhaki tin agheladha?
"What does the boy want to do with the cow?"

CHI:	Na	ti	vali	mesa.
	M	CL.FEM.ACC	put–3S	in

[Elicited Clause: *na*–clause]

CONTENT REMOVED FOR COPYRIGHT REASONS

(7) EXP: Ti kamni i mama tu moru?
"What does mum do with the baby?"
CHI: Thkjevazi tu paramithi.
Read–3S CL.NEU.DAT fairy–tale
[Elicited Clause: root clause]

CONTENT REMOVED FOR COPYRIGHT REASONS

(8) EXP: Ti enna kami i kiria tu mitsi?
"What is the lady going to do to the boy?"

CHI:	Enna	tu	vali / forisi	to	paputsi
	M	CL.MASC.DAT	put on / wear–3S	the	shoe

[Elicited Clause: *enna*–clause]

Answer Sheet

Nursery School:	School Reference Number:
Child's Name:	Code:
Date Of Birth: Age: Years; Months. Days:	Age Group: A: 2;6–3;0 B: 3;0–3;6 C: 3;6–4;0

PRODUCTION					
	CL	OM	NP	N/A	OT
1. Ti theli na kami to koritsaki to kadhro?					
2. Ti ekamen o shilos tis koruas?					
3. Ti ekamen i korua tin alin klatsa?					
4. Ti ena kami o papas tu moru?					
5. Ti ekamen i mama to pkjato?					
6. Ti theli na kami to pedhaki tin agheladha?					
7. Ti kamni i mama tu moru?					
8. Ti ena kami i kiria tu mitsi?					

PLACEMENT	
Root Clauses	*Na / Enna*–clauses
2. Correct / Incorrect 3. Correct / Incorrect 5. Correct / Incorrect 7. Correct / Incorrect	1. Correct / Incorrect 4. Correct / Incorrect 6. Correct / Incorrect 8. Correct / Incorrect
Overall Correct = Incorrect =	Overall Correct = Incorrect =

CL: Clitic

OM: Omission

NP: Noun Phrase

N/A: No Answer

OT: Other

Subjects	Age	Sex	ROOT				MODAL CLAUSES			
			TARGET	NON–TARGET			TARGET	NON–TARGET		
			CLITIC	N/A	OTHER	OMISSION	CLITIC	N/A	OTHER	OMISSION
AGE GROUP A (2;6–3;0)										
P1	2;6.7 = 2;6	0	3	1	0	0	1	3	0	0
P2	2;6.8 = 2;6	0	3	0	1	0	3	1	0	0
P3	2;6.15 = 2;6	0	4	0	0	0	2	2	0	0
P4	2;6.25 = 2;7	0	3	0	1	0	4	0	0	0
P5	2;7.17 = 2;8	0	1	0	3	0	0	1	3	0
P6	2;8 = 2;8	1	1	0	3	0	2	1	1	0
P7	2;8.17 = 2;9	0	4	0	0	0	3	0	1	0
P8	2;8.25 = 2;9	0	1	3	0	0	0	3	1	0
P9	2;9.27 = 2;10	1	3	1	0	0	2	1	1	0

P10	2;10.11 = 2;10	1	4	0	0	0	3	1	0	0
P11	2;10.29 = 2;11	0	3	0	1	0	3	1	0	0
P12	2;11 = 2;11	1	1	0	1	1	1	2	0	1
P13	2;11.7 = 2;11	1	4	0	0	0	3	0	0	1
P14	2;11.9 = 2;11	0	3	0	1	0	3	1	0	0
P15	2;11.23 = 3;0	0	2	1	1	0	1	2	0	1
P16	3;0.4 = 3;0	1	2	0	0	2	2	0	2	0
P17	3;0.11 = 3;0	0	2	0	1	1	2	2	0	0
P18	3;0.13 = 3;0	0	4	0	0	0	3	0	1	0
Overall	2;6–3;0	–	48	6	13	4	38	21	10	3
AGE GROUP B (3;0–3;6)										
P19	3;0.26 = 3;1	1	3	0	1	0	3	1	0	0

P20	3;1.7 = 3;1	1	2	1	1	0	4	0	0	0
P21	3;1.13 = 3;1	1	4	0	0	0	2	2	0	0
P22	3;1.21 = 3;2	0	4	0	0	0	2	1	0	1
P23	3;2.1 = 3;2	1	1	0	3	0	1	3	0	0
P24	3;2.11 = 3;2	1	3	0	0	1	4	0	0	0
P26	3;2.15 = 3;2	0	4	0	0	0	4	0	0	0
P27	3;2.18 = 3;3	1	3	0	1	0	1	2	1	0
P28	3;2.29 = 3;3	1	1	0	2	1	3	1	0	0
P29	3;3.10 = 3;3	0	3	1	0	0	0	4	0	0
P30	3;3.14 = 3;3	1	2	0	2	0	1	1	2	0
P31	3;3.23 = 3;4	1	3	0	0	1	2	2	0	0
P32	3;4.25 = 3;5	0	2	1	0	1	1	2	0	1

P33	3;5.6 = 3;5	1	2	0	2	0	4	0	0	0
P34	3;5.9 = 3;5	0	3	0	1	0	3	1	0	0
P35	3;5.14 = 3;5	0	3	0	1	0	3	1	0	0
P36	3;5.25 = 3;6	0	4	0	0	0	4	0	0	0
P37	3;6.9 = 3;6	1	1	0	1	1	3	0	1	0
P38	3;6.9 = 3;6	1	3	0	1	0	3	1	0	0
P39	3;6.11 = 3;6	1	3	0	1	0	4	0	0	0
P40	3;6.13 = 3;6	0	4	0	0	0	3	1	0	0
P41	3;6.15 = 3;6	1	4	0	0	0	3	0	0	1
Overall	3;0–3;6	–	62	3	17	5	58	23	4	3
AGE GROUP C (3;6–4;0)										
P42	3;7	1	3	1	0	0	3	1	0	0

P43	3;6.29 = 3;7	1	3	1	0	0	1	1	2	0
P44	3;6.22 = 3;7	0	4	0	0	0	4	0	0	0
P45	3;7.8 = ;7	0	2	1	1	0	2	2	0	0
P46	3;7.24 = 3;8	1	2	2	0	0	1	3	0	0
P47	3;8.12 = 3;8	0	3	0	1	0	4	0	0	0
P48	3;8.17 = 3;9	0	3	0	1	0	3	0	1	0
P49	3;8.18 = 3;9	0	3	0	1	0	3	0	0	1
P50	3;9.9 = 3;9	1	2	0	1	1	3	1	0	0
P51	3;10.27 = 3;11	0	3	0	0	1	3	0	0	1
Overall	3;6–4;0	–	28	5	5	2	27	8	3	2

Subjects	Age	Sex	ROOT	ROOT COR	ROOT INCOR	M	M COR	M INCOR
P1	2;6.7 = 2;6	0	3	3	0	1	1	0
P2	2;6.8 = 2;6	0	3	3	0	3	3	0
P3	2;6.15 = 2;6	0	4	4	0	2	2	0
P4	2;6.25 = 2;7	0	3	3	0	4	4	0
P5	2;7.17 = 2;8	0	1	1	0	0	0	0
P6	2;8 = 2;8	1	1	1	0	2	0	2
P7	2;8.17 = 2;9	0	4	4	0	3	3	0
P8	2;8.25 = 2;9	0	1	1	0	0	0	0
P9	2;9.27 = 2;10	1	3	3	0	2	0	2
P10	2;10.11 = 2;10	1	4	4	0	3	3	0
P11	2;10.29 = 2;11	0	3	3	0	3	3	0
P12	2;11 = 2;11	1	1	1	0	1	1	0

P13	2;11.7 = 2;11	1	4	4	0	3	0	3
P14	2;11.9 = 2;11	0	3	3	0	3	0	3
P15	2;11.23 = 3;0	0	2	2	0	1	1	0
P16	3;0.4 = 3;0	1	2	2	0	2	2	0
P17	3;0.11 = 3;0	0	2	2	0	2	2	0
P18	3;0.13 = 3;0	0	4	4	0	3	0	3
P19	3;0.26 = 3;1	1	2	2	0	3	3	0
P20	3;1.7 = 3;1	1	2	2	0	4	4	0
P21	3;1.13 = 3;1	1	4	4	0	2	2	0
P22	3;1.21 = 3;2	0	4	4	0	2	0	2
P23	3;2.1 = 3;2	1	1	1	0	1	1	0
P24	3;2.11 = 3;2	1	3	3	0	4	4	0

P26	3;2.15 = 3;2	0	4	4	0	4	4	0
P27	3;2.18 = 3;3	1	3	3	0	1	0	1
P28	3;2.29 = 3;3	1	1	1	0	3	3	0
P29	3;3.10 = 3;3	0	3	2	1	0	0	0
P30	3;3.14 = 3;3	1	2	2	0	1	1	0
P31	3;3.23 = 3;4	1	3	3	0	2	2	0
P32	3;4.25 = 3;5	0	2	2	0	1	1	0
P33	3;5.6 = 3;5	1	3	3	0	4	4	0
P34	3;5.9 = 3;5	0	3	3	0	3	3	0
P35	3;5.14 = 3;5	0	3	3	0	3	3	0
P36	3;5.25 = 3;6	0	4	4	0	4	4	0
P37	3;6.9 = 3;6	1	1	1	0	3	3	0

P38	3;6.9 = 3;6	1	3	3	0	3	3	0
P39	3;6.11 = 3;6	1	3	3	0	4	4	0
P40	3;6.13 = 3;6	0	4	4	0	3	3	0
P41	3;6.15 = 3;6	1	4	4	0	3	3	0
P42	3;7	1	3	3	0	3	3	0
P43	3;6.29 = 3;7	1	3	3	0	1	1	0
P44	3;6.22 = 3;7	0	4	4	0	4	4	0
P45	3;7.8 = ;7	0	2	2	0	2	2	0
P46	3;7.24 = 3;8	1	2	2	0	1	1	0
P47	3;8.12 = 3;8	0	3	3	0	4	4	0
P48	3;8.17 = 3;9	0	3	3	0	3	3	0
P49	3;8.18 = 3;9	0	3	3	0	3	3	0

P50	3;9.9 = 3;9	1	2	2	0	3	3	0
P51	3;10.27 = 3;11	0	3	3	0	3	3	0