

# Clitic Misplacement Among Normally Developing Children and Children With Specific Language Impairment and the Status of InfI Heads

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In this article, we focus on an exceptional instance of nonadult positioning of clitics in early Cypriot Greek and Cypriot Greek with specific language impairment (SLI). We attribute misplaced clitics to children's incomplete knowledge concerning properties of the inflectional (InfI) particles, which interact in crucial ways with finite V(erb) movement to M(ood). We claim that children perceive InfI particles as phrasal specifiers or adjuncts, unable to check the V-features of M, hence perform V-to-M movement even in their presence, and clitics emerge in (nonadult) postverbal position, giving the impression that they have been misplaced. We point out that functional heads seem to be perceived as phrasal in other early languages and possibly also in domains other than InfI, and we explain why clitics are not found misplaced in standard Greek and standard Romance, with the exception of Portuguese. Finally, the absence of qualitative differences between the early populations and populations with SLI we studied corroborates with views that consider SLI a language delay, but the degree to which quantitative differences were attested raises questions.

## 1. INTRODUCTION

Research on early language and on specific language impairment (SLI) has revealed that clitics are often omitted from syntactic contexts in which their presence is obligatory in the adult normal language (Avram (1999), Bottani, Cipriani,

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and Chilosí (2000), Guasti (1993/1994), Jakubowicz, Nash, Rigaut, and Gérard (1998), Marinis (2000), Torrens and Wexler (1996), and Tsimpli (2001)). Omission of clitics has been attributed to various factors. The nature of the phenomenon and the implications it has for understanding both early language and SLI have been some of the main issues that have concerned the previously mentioned studies. These are some of the issues that concern this study as well.

Rather than focusing on the presence versus absence of clitics, however, in this work we focus on where clitics are placed in the sentence when present—in particular, on an exceptional instance in which they are found misplaced—in a number of syntactic environments. We call this phenomenon *clitic misplacement*, and we believe it is a behavior that raises various questions that we address and attempt to answer. With these objectives, we conducted a study of early normally developing and SLI Cypriot Greek, as in this language clitics are often found misplaced (viz., in positions that are illicit for normal adult grammar) among normal language developing children and children diagnosed with SLI. The phenomenon is unexplored, and it makes one wonder what may be the factors that trigger it and how its understanding can contribute not only to what we know about early language and SLI but to what we know about clitics and their hosts from a theoretical perspective. Finally, our goal also was to determine the age at which children reach adult positioning of clitics.

In anticipation of some of our conclusions, we provide a syntactic account of clitic misplacement and show why we believe it is to be preferred from a prosodic explanation. We consider children's "deviant" behavior to arise from the fact that they have not yet grasped certain properties of Inflection: (Infl)—more precisely, properties of the Infl particles that, when interacting with a specific type of finite verb movement that takes place in the language and is primarily responsible for enclisis (the order verb-clitic (V-cl)) in finite contexts, prevent it from taking place. Children's lack of this knowledge, in ways we make precise in this article, results in verb movement even in the presence of the particles and hence in a larger proportion of enclitics and in different syntactic environments than what is encountered in the adult language. We demonstrate that comparable behavior seems to be manifested by children in other languages as well but has overt manifestations in other domains of the sentential structure. Finally, we compare the data from the normally developing population and the population with SLI we studied, we did not seem to find differences that directly point toward different patterns of development. Nevertheless, the sharp quantitative differences we observed in terms of clitic placement between the two populations made us want to be cautious with respect to deciding on (non)distinct developmental patterns.

This article is structured as follows: In section 2 we present the facts from normal language and the linguistic accounts that have been proposed to accommodate them. In section 3, we offer an overview of the facts from early and SLI language and the issues they raise. In section 4, we describe the study we con-

ducted and the results obtained, and in the final section we discuss our findings and lay out our proposals.

## 2. CLITIC PLACEMENT IN THE ADULT NORMAL LANGUAGE

### 2.1. The Facts

Cypriot Greek is a Tobler-Mussafia type language, a result of which is that clitics may not appear first in the sentence, (1a), but must follow the finite verb in various syntactic contexts, (1b). Therefore, Cypriot Greek resembles Portuguese as far as placement of clitics is concerned and differs from standard Greek, which behaves like Spanish and Italian in this respect.<sup>1</sup>

- (1) a. \*Se ida.  
you-cl saw-1s  
b. Ida se.  
saw-1s you-cl  
'I saw you.'

However, when the finite verb is preceded by some functional head, clitics must immediately precede the verb. Some examples appear in (2) and (3) in which the relevant functional heads are Neg(ation) and M(ood), respectively; see Terzi (1999b) for other functional heads with similar effects on the positioning of clitics.

- (2) a. (D)en to efaða.  
Neg it-cl ate-1s  
b. \*(D)en efaða to.  
Neg ate-1s it-cl  
'I didn't eat it.'
- (3) a. Thelo na to fao.  
want-1s M it-cl eat-1s  
b. \*Thelo na fao to.  
want-1s M eat-1s it-cl  
'I want to eat it.'

<sup>1</sup>We do not include a discussion of clitics with infinitives, gerunds, and imperatives, as they are postverbal across all aforementioned languages regardless of their placement in finite contexts. Furthermore, the former syntactic environments have not produced early and SLI data that deserve particular attention. We also mention in passing that only pronominal clitics are available in (both standard and) Cypriot Greek; thus, the term *clitics* refers exclusively to them throughout the article.

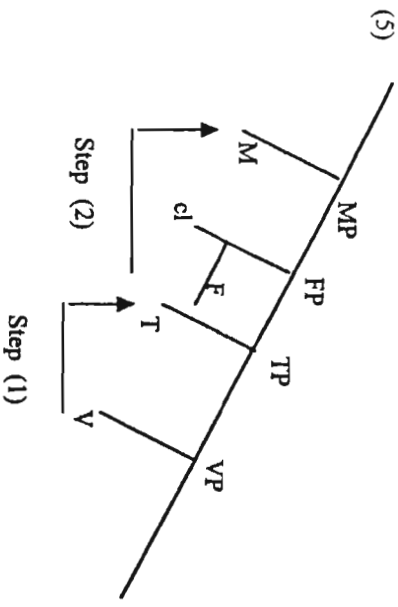
We should stress here that not any element that precedes the verb may switch the position of clitics from postverbal to preverbal—only those that are functional heads. This is why clitics continue to be postverbal when what precedes the verb is the subject, for instance, as seen in the following example:

- (4) O daskalos agapa tin.  
 the teacher loves her-cl  
 'The teacher loves her.'

Notice furthermore that when a functional head precedes the verb, (2a) and (3a), the surface order of the functional head, the clitics and the verb are identical to their order in the standard Greek, Spanish, and Italian counterpart structures, all three being languages in which clitics are not subject to the positioning restrictions of Cypriot Greek. This similarity has primarily led a number of approaches to enclisis that we review next (including the one we eventually adopt) to consider clitics to occupy the same position in the clausal structure in both language groups.

2.2. Accounts of Finite Enclisis

It has been proposed for Cypriot Greek that the postverbal position of clitics in finite contexts is the result of verb movement to M, the head of mood phrase (MP; Terzi (1999a, 1999b)), as illustrated in (5). Because clitics adjoin to a lower functional head than M (an empty functional head F in Terzi (1999a), who adopted proposals in Kayne (1994)), the finite verb movement to M leaves them behind giving rise to the order V-cl.



In this work, we take up a suggestion in Terzi (1999b) according to which V-to-M movement is related to the Infl properties of the finite sentence in which it takes

place, in particular, to properties of M. Manifestations of the distinct properties of the Cypriot Greek M are considered to be the lack of the future particle *tha*, which is characteristic of the future across all Balkan languages, including standard Greek, and the lack of the so-called periphrastic tenses.<sup>2</sup> We consider Step 2 of the V-movement in (5)—namely, the V-movement from agreement/lense (Agr/T) to M, which is a crucial part of the finite verb movement because it results in enclisis—to be associated with these properties. This amounts to saying that we perceive M as the locus that encompasses the aforementioned properties of Cypriot Infl in ways that remain to be made precise but that we attempt to capture and unify here by saying that Cypriot Greek M has strong V features that attract the finite verb in the overt syntax. Movement of the finite verb from Agr/T to M is absent from languages such as standard Greek, Spanish, or Italian, all three of which demonstrate proclisis (the order clitic-verb (cl-V)) in finite contexts and are not associated with Infl which exhibits the behavior of the Cypriot Greek Infl.

When the modal particle *na* is present in Cypriot Greek, it checks the strong V-features of M (presumably through Merge); hence, no need for V-to-M movement arises. In this case the finite verb moves only as high as T (Step (1) in (5)), and the order that surfaces is the order cl-V of sentences such as (2a). For similar reasons, the verb does not move as high as M when Neg is present (conceivably Neg moves to M then) and the surface order is cl-V again (3a). Adopting proposals in Ndayiragije (1999), we assume that only the formal features of functional heads need to be checked for convergence. Therefore, although the verb does not move to M in the previous derivations (because the relevant features of M are checked by Merge of the subjunctive particle or Move of the negative particle), the derivations still converge.

A similar view to enclisis is expressed in Uriagereka (1995) for Galician, suggesting that the verb also moves to a functional head above Infl, whose features are strong and thus require checking before Spell-Out. Uriagereka's (1995) F, the functional head that encodes the speaker's point of view and to which the finite verb moves and adjoins, is the functional head to which clitics also adjoin and thus is different in this respect (but also with respect to other properties) from the F head we have postulated in (5)—nevertheless not in ways that are crucially relevant for this study. Although no clear empirical support is offered for the strong features of F that trigger enclisis in Galician and Western Romance (at least not ways to differentiate it from the rest of Romance languages), it should not go unnoticed that Galician also lacks periphrastic tenses (J. Uriagereka, personal com-

<sup>2</sup>See Aerts (1983) for a detailed study of the evolution of the Cypriot Greek future. In short, although in standard Greek, as well as in the rest of the Balkan languages, there is a distinct Infl particle introducing the future tense (see Terzi (1997) and references therein), Cypriot Greek uses the form *enna*, which is considered a compound of *theli* 'wants' + *na* (*na* is the subjunctive marker M; see example (3) in the main text).

As for periphrastic tenses, they are practically absent from contemporary Cypriot Greek, and forms such as *eho fai, tha fai* 'have eaten', 'had eaten' are substituted by *efaca 'aie'* (Menardos (1969)).

munication, 1995). Furthermore, although periphrastic tenses are not absent from Portuguese, the much discussed construction of the inflected infinitive is associated with lack of tense (see Raposo (1987)), and a relation between inflected infinitives and finite enclisis is also hinted in Uriagereka (1995) for Portuguese. Finally, a similar approach to finite enclisis is also expressed in Martins (1994) for Portuguese on the empirical grounds of verb phrase (VP) deletion that differentiates Portuguese from Spanish and Catalan. For Martins, the host of the verb movement that results in enclisis is S, the head of Sigma Phrase, a functional head that is the locus of affirmation–negation and is also higher in the clausal structure than AgrP/TP.

It follows from the preceding discussion that finite enclisis is of the same nature in Cypriot Greek and Portuguese/Galician and we would be missing a generalization if we did not attribute it to similar factors, namely, to properties of an Infl head above TP expressed in terms of strong V-features that trigger movement of the finite verb to it in the overt syntax.<sup>3</sup> When these features are checked via some other mechanism (Merge or Move of some inflectional head that precedes the verb), no need for V-movement arises, and the result is proclisis.<sup>4</sup>

Duarte and Matos (2000) advocated a different view to finite enclisis in Portuguese, one that capitalizes on properties of the clitics rather than properties of the verb. The affix-like character they attribute to Portuguese clitics leads to enclisis as the only option for feature checking of both clitics and the associated verb with the various functional heads in the sentential structure. Checking of the same features cannot take place in other Romance languages if verb and clitics moved in a

<sup>3</sup>It is of no consequence for this work whether AgrP is present (but below TP, as in Pollock (1989)) or whether its role is downplayed (as in Chomsky (1995)), hence its absence from the diagrams in (5) and (18) later in the article.

<sup>4</sup>As a reviewer pointed out, if focused constituents also result in proclisis, the plausibility of finite verb movement to M for reasons that have to do with properties of M, at least as these are described here, becomes less plausible. Terzi (1999b) discussed explicitly the differences between focused and clitic left dislocated constituents associated with proclisis and enclisis respectively and, following standard assumptions, associated the presence of a (non-over) Focus head with the former but not with the latter. Therefore, if the Focus head is standardly taken to be higher than M in the sentential structure, one would have to assume lowering of it (to M) in order to satisfy the feature checking requirements of M. In such a state of affairs, as the same reviewer pointed out, an account of finite verb movement to M to satisfy licensing requirements of clitics rather than of M (or the “special” Infl domain) becomes more plausible.

We must note that focused constituents have the same effect on clitic positioning in the typical Tobler-Mussaïfa languages as well, but no particular effort has been made to accommodate them. We do not have anything more interesting or satisfactory to contribute in this respect, but we should point out that in the literature on clitic positioning restrictions (see Bošković (2001) for a recent review) satisfaction of licensing requirements of clitics has been associated with the Slavic languages rather than with those of the Cypriot/Portuguese type. Furthermore, when it comes to the latter languages, one should also bear in mind that clitics, although banned from first position, remain adjacent to the verb, a behavior in favor of a crucial role played by the verb and its Infl domain. Finally, as described and discussed in detail in Terzi (1999b), Cypriot Greek clitic positioning restrictions clearly follow the pattern of Portuguese and Galician rather than that of the Slavic (Wackernagel) languages.

similar manner and hence resulted in V-cl; this is why finite enclisis cannot be obtained. It is interesting that even this (partially prosodic) approach to enclisis has not disregarded the role played by the material that precedes the verb (although in different ways than the approach we follow). Adopting proposals of Frola and Vigaró (1996), according to whom “a prosodic constituent is heavy in European Portuguese iff it focuses or branches,” Duarte and Matos claimed that proclisis amounts to attraction of the clitic by a heavy functional word that c-commands it within the same complementizer phrase (CP). On the other hand, according to our line of reasoning elements that precede the finite verb prohibit the verb from moving to a higher position in the sentential structure with the same consequences for word order, namely, proclisis.

In the remainder of the article, we demonstrate that by attributing a crucial role to properties of M and the associated V-movement (rather than movement of clitics) for finite enclisis we are in a position to understand the factors that trigger clitic misplacement in early and SLI language as well. Furthermore, our claims concerning properties of M in the cases we studied find interesting support from the behavior of the Infl domain of other early languages. For the time being, we present, in the section that follows, a general overview of the facts from early and SLI Cypriot Greek that constitute the main focus of the article.

### 3. EARLY NORMALLY DEVELOPING AND IMPAIRED LANGUAGE

#### 3.1. The Facts

It is known among native speakers of Cypriot Greek (but has not been studied formally) that child language does not conform to the adult pattern when it comes to clitic placement. Specifically, children tend to place clitics after the verb in contexts this is not allowed by adult language. As expected, much less is known about the behavior of clitics in SLI language. The following sentences are some actual examples of clitic misplacement extracted from the data we collected and analyzed and give a first picture of the phenomenon. AK and LK are fraternal twins, age 4;6. AK has normal language development, whereas his sister LK was diagnosed with SLI. Sentences (6) and (7) are answers to the question “What should we do with these stickers?”:

- (6) Na ta kolisis pano sto tetradio sou.  
M them-cl stick-2s on-the notebook your  
(‘(To) stick them on your notebook.’)  
(AK)

Adult: Na ta kolisis pano sto tetradio sou.

- (7) a kolisume ta Δ tetradio mou.  
M stick-1p them-cl (on-the) notebook my  
'(To) stick them on my notebook.'  
(LK)

Ad: Na ta kolisoume sto tetradio mou.

- (8) Oi, en aresi mou.  
no Neg please-3s me-cl  
'No, I don't like (it)'  
(LK)

Ad: Oi, en mou aresi.

- (9) Oi fori ta touta.  
no wear-3s them-cl these  
'He doesn't wear these.'  
(LK)

Ad: Oi, den ta fori touta, or, Den ta fori touta.

- (10) B(ɣ)azoume ta me rizi.  
boil-1p them-cl with rice  
'We boil them with rice.'  
(LK)

Ad: Brazoume ta me rizi.

The examples show that in LK's language clitics are placed after the verb even in sentences such as (7) to (9). These are ungrammatical sentences in adult normal language because in (7) the finite verb is preceded by the subjunctive marker and in (8) and (9) by negation. On the other hand, AK's clitic placement at the same age conforms to the adult pattern, a manifestation of which is the contrast in clitic positioning with respect to the finite verb in (6) versus (7). We should also point out here that LK misplaces clitics across-the-board, namely, in all the sentences she produces. This contrasts our findings from early language (earlier than AK's) in which clitic misplacement takes place to a lesser extent, as we report in detail in subsequent sections. Example (10) has been included primarily to demonstrate that when no functional head precedes that finite verb, clitic placement in SLI appears identical to clitic placement in normal language. This comes up in the discussion of data analysis.

### 3.2. The Issues That Misplaced Clitics Raise

The pervasive misplacement of clitics manifested by early and SLI Cypriot Greek raises a number of questions. From a developmental perspective, the question revolves around the age at which children acquire adult clitic placement. We

thought that an answer to this question has the potential of identifying a clinical marker for SLI in the language (see Rice and Wexler (1996) for English).<sup>5</sup> At the conceptual level, one wonders what the factors are that induce clitic misplacement and to what other processes is the phenomenon related. An answer to this question can presumably contribute to the evaluation of competing analysis of enclisis, explain why clitic misplacement is not attested in languages such as standard Greek or Spanish and Italian, and contribute to a better understanding of the properties of clitics and their hosts from a theoretical perspective overall. Last, but not least, it would be interesting to know whether this particular phenomenon can shed new light onto the nature of SLI. In the following section, we report the study we conducted to address the preceding issues.

## 4. THE STUDY

### 4.1. Participants

The participants of the study were 10 Cypriot-Greek-speaking children: 5 children with normal language development (NLD) and 5 with the diagnosis of SLI. All children came from homes with Cypriot Greek as the dominant language, and they all passed a hearing screening at 25 dB hearing level at 500, 1000, 2000, and 4000 Hz.

The group with NLD consisted of 3 boys and 2 girls who were followed longitudinally every 2 months. Their ages in months ranged from 32 to 36, and they were drawn from a cohort of children participating in an ongoing project regarding linguistic development of Cypriot-Greek-speaking preschoolers. Based on case history information provided by each child's parent, developmental milestones were reached at expected age levels. All children passed a speech and language screening battery that consisted of comprehension and production of linguistic tasks developed by Kasia Petinou. The checklist included items such as the production and comprehension of basic concepts, the following of two-step directions, and the production of three-word utterances prompted via picture stimuli. Phonological and articulatory skills were age appropriate as determined by the Test of Articulation (Kontu and Nikolaides (1993)).

The group with SLI consisted of 3 boys and 2 girls with age range 48 to 60 months ( $M = 54$ ,  $SD = 6$ ). These children were diagnosed with SLI by a certified speech-language pathologist, and at the time of data collection they were complet-

<sup>5</sup>Conceivably, the outcome of our study may also be able to assist toward an efficient theory motivated therapy (see Thompson et al. (1997) for [syntactic] theory-motivated therapy applied to Broca's aphasias and Ebbels and van der Lely (2001) for SLI).

ing their 5th month of language therapy.<sup>6</sup> The children of this group met the following criteria:

- (i) No cognitive deficits based on measures of nonverbal ability indicated by a percentile score greater than 50 on Raven's Coloured Matrices (Raven, Court, and Raven (1986)).<sup>7</sup>
- (ii) Absence of autistic symptoms according to criteria listed in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association (1996)).
- (iii) Absence of frank neurological impairment.
- (iv) Absence of otitis media history.
- (v) No deviations in the function and structure of the oral mechanism based on a passing score on the Oral Speech Mechanism Screening Evaluation-Revised (Louis and Ruscello (1987)) criteria, suggested by Leonard (1998) and Stark and Tallal (1981).

The 5 children with SLI were matched to the children with NLD for mean length of utterance in words (MLU-W), gender, and socioeconomic status (SES; Republic of Cyprus Health Survey (1989)). The SES scale consists of five levels based on formal education and gross salary per household with "I" corresponding to the highest level and "V" to the lowest. The two groups were not significantly different for MLU-W,  $t(8) = .002, p > .05$ . Table 1 shows gender and SES information of the two study groups.

#### 4.2. Speech Samples

For the longitudinal part of the investigation that included only the group with NLD, data collection was based on language samples recorded bimonthly over a period of 4 months (ages 32, 34, and 36 months). A standard set of toys including plastic food items and plastic figures was used to elicit speech samples. The toys

<sup>7</sup>The assessment battery examined each child's receptive skills on tasks involving the comprehension of basic concepts, comprehension of linguistic concepts, comprehension of word and sentence structure, and comprehension of grammatical morphemes. Expressive language skills were also determined based on spontaneous utterances produced during naturalistic language sample collection. Language samples were analyzed for mean length of utterance in words and structural errors involving omission or incorrect use of morphological inflection; omission or incorrect use of function words (definite and indefinite articles, prepositions, pronouns); errors in word order; errors in subject-verb agreement for number and person; and errors in noun-adjective agreement for person, case, and number. A descriptive analysis of language samples indicated that children with SLI presented errors including definite article omissions, marking for gender and number, subject-verb agreement and case agreement in the noun phrase.

<sup>8</sup>For the two younger children with SLI (SK and FI), the percentile score was derived according to the extrapolated means that cover performance of children from ages 3;6 to 5;0 years (Raven's Coloured Matrices, see Raven et al. (1986)).

TABLE 1  
Children With Normal Language Development (NLD) and Specific Language Impairment (SLI) Matched for Gender and Socioeconomic Status (SES)

	Gender	SES	PCM Percentile Score
NLD			
OX	F	II	na
NA	M	II	na
AM	M	I	na
AI	F	II	na
AX	M	II	na
M	—	—	—
SD	—	—	—
SLI			
LK	F	II	50
EP	M	II	50
GK	M	I	75
SK	F	II	75
FI	M	II	75
M	—	—	65
SD	—	—	13.6

Note. F = female; M = male; PCM = proportion of clitic misplacement.

and sampling methods were held constant across sessions and across children. The sessions took place in a quiet room in a speech and language clinic in Nicosia, Cyprus, and were audio-recorded with a digital audio recorder. Each session lasted approximately 45 min. During the first 15 min the child interacted with his or her parent who was blind to the nature of the study. Parents were encouraged to interact with their children as naturally as possible. During the remaining 30 min of the session each child was engaged in a communicative interaction with the examiner.

The second part of the investigation was not longitudinal; thus, the children with SLI were tested only once. Data collection guidelines were comparable to procedures used with the children with NLD. Because children with SLI were chronologically older than their counterparts with NLD, a different set of toys was used and included plastic toy figures, books, and puzzles.

#### 4.3. Data Analysis

The total corpus of the utterances produced by each child was phonetically transcribed using the International Phonetic Alphabet (IPA). Transcriptions were performed by Kasia Petinou, who has been trained in child language phonetic transcription.

Data analysis focused on the proportion of clitic misplacement (PCM) in the two study groups. PCM was calculated by dividing the total number of clitic misplacement instances observed in a given speech corpus over the total number of correct and incorrect clitic placement instances in the relevant contexts. By *relevant contexts* we refer to those syntactic contexts in which adult language forces proclisis and that amount to subjunctive and negative sentences in our corpus.<sup>8</sup> Thus, sentences such as (10) were not included in the data we analyzed. Finally, our data did not contain instances of potential focus constructions, which also are associated with proclisis in adult language.

**4.3.1. Transcription reliability.** Four transcriptions—two from each group (approximately 10% of samples)—corresponding to four different children were randomly selected for the purposes of transcription reliability. The samples were phonetically transcribed independently by Kaki Petinou and another transcriber familiar with IPA guidelines. Transcription agreement reliability was based on the number of agreements divided by agreements plus disagreements after the two coders had jointly listened to the tapes and had compared notes regarding place and manner of articulation features and proportion of clitic misplacement. Disagreements were resolved by discussion. Average interrater transcription reliability for manner and place of articulation was 87% and 90%, respectively. Reliability on instances of clitic misplacement was 100%.

#### 4.4. Results

The first analysis focused on PCM as a function of age within the group with NLD. The second analysis compared PCM between the group with NLD and the group with SLI. All proportions were transformed to arcsines prior to statistical analysis.

**4.4.1. PCM as a function of age in the group with NLD.** The purpose of this analysis was to examine the pattern of clitic misplacement across the three age levels of the children with normal language development. PCM across the three age levels of Table 2 was compared with the use of three paired comparisons ( $p < .05$ ) performed between 32 and 34 months, 32 and 36 months, and 34 and 36 months. Significant differences were revealed between ages 32 and 36 months,  $t(8) = 1.92, p < .05$ . No significant differences were seen 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 at 32 months ( $M = .33$ ) when compared to 36 months ( $M = .03$ ).

<sup>8</sup>In the group of relevant contexts we also included subjunctive sentences in which a subjunctive marker was missing (see (11) for an example and footnote 14 for actual omission numbers) and those in which a root subjunctive was used with the force of an imperative (see example (7)).

TABLE 2  
PCM and MLU-W as a Function of Age in the Normally Developing Group

	32 Months		34 Months		36 Months	
	PCM	MLU-W	PCM	MLU-W	PCM	MLU-W
OX	10% (3/30)	3.0	2% (1/52)	3.6	0% (0/61)	3.3
NA	66% (16/24)	2.8	28% (5/18)	3.1	12% (4/33)	3.3
AM	7% (2/26)	2.8	0% (0/17)	3.2	0% (0/34)	4.0
AI	21% (3/14)	2.4	14% (3/21)	3.0	5% (2/37)	3.4
AX	62% (20/32)	2.9	44% (13/29)	3.1	0% (0/38)	4.0
<i>M</i>	33%	2.8	18%	3.2	3%	3.6
<i>SD</i>	28%	0.22	16%	0.23	5%	0.36

Note. The first number in parentheses refers to the number of misplaced clitics, and the second number is the occurrence of all clitics per individual, both misplaced and correctly placed. PCM = proportion of clitic misplacement; MLU-W = mean length of utterance in words.

TABLE 3  
Children With Normal Language Development (NLD) and Specific Language Impairment (SLI) Matched for MLU-W

	Age (Months)		MLU-W	PCM
	NLD	SLI		
OX	34	60	3.6	2% (1/52)
NA	32	48	2.8	66% (16/24)
AM	36	60	4.0	0% (0/34)
AI	32	48	2.4	21% (3/14)
AX	32	54	2.9	62% (20/32)
<i>M</i>	33.2	54	3.1	30%
<i>SD</i>	1.6	54	0.61	29%
SLI		60	3.8	100% (33/33)
LK		48	2.7	100% (47/47)
GK		60	4.0	100% (20/20)
SK		48	2.4	100% (31/31)
EP		54	2.9	100% (16/16)
<i>M</i>		54	3.2	100%
<i>SD</i>		6	0.71	0%

Note. The first number in parentheses refers to the number of misplaced clitics, and the second number is the occurrence of all clitics per individual, both misplaced and correctly placed. MLU-W = mean length of utterance in words; PCM = proportion of clitic misplacement.

**4.4.2. PCM between children with NLD and SLI.** PCM was compared between the group with SLI and the language matched group with NLD and is reported in Table 3. Each one of the children with SLI in Table 3 was matched to the child on the same line in Table 3 of children with NLD in terms of MLU-W (but also gender and SES, as already shown in Table 1). Thus, child LK with SLI had

an MLU-W of 3.8 compared to the MLU-W of 3.6 of child OX with NLD. Similarly, child EP with SLI had an MLU-W of 2.9, which is identical to the MLU-W of child AX with NLD in Table 3. The same reasoning holds for the other three pairs of children. PCM was significantly larger (and invariant) in the group with SLI ( $M = 1.0$ ,  $SD = .00$ ) when compared to the group with NLD ( $M = 0.31$ ,  $SD = .29$ ),  $t(8) = 6.93$ ,  $p < .05$ .

## 5. DISCUSSION

### 5.1. Developmental Aspect

The data from the longitudinal study revealed a developmental trend toward the acquisition of clitic placement (see Table 2). In particular, the results suggest progression toward adult clitic placement within a period of 4 months ranging from 32 to 36 months. Notice that adult clitic placement was attained by 36 months even by the 2 children in our study who started with an extremely high proportion of clitic misplacement (0.62 and 0.66 in Table 2). These two children did not differ from the rest in terms of SES, and they did not receive child-directed speech that contained instances of clitic misplacement. It is appropriate to also mention here that none of the parents of our study used clitic misplacement during the interactions with their children. Finally, we observe in Table 2 an inverse relation to hold between MLU and PCM in the sense that PCM decreases as MLU increases. It does not seem, however, that higher MLU places children at a better starting position with respect to adult clitic placement.

If we had a larger body of data we would have been in a safer position to claim that adult clitic placement is acquired by age 3 years in Cypriot Greek. Moreover, an even earlier age of acquisition should not be excluded either. Evidence for a potentially younger age at which acquisition of finite enclisis is attained was provided by a follow-up testing we did in which we measured PCM and MLU-W of three additional children whose spontaneous speech data had been collected for a study on the phonological development of Cypriot Greek.<sup>9</sup> None of these children demonstrated instances of clitic misplacement, despite the fact that they were considerably younger than the children of our initial study.<sup>10</sup> The relevant data appear in Table 4.

<sup>9</sup>This is why the total occurrences of clitics were so limited: hence, their contribution to the age of acquisition was perhaps not as important as we would have liked. By contrast, the utterances of the children we tested for the purposes of this study were especially tuned toward contexts involving the use of clitics.

<sup>10</sup>Duarte and Matos (2000) reported a few instances of illicit postverbal clitics in Portuguese child language up to the age of 42 months. Taking into account, however, that their article does not refer to systematic data collection and analysis, it is rather safe to assume that the Cypriot Greek children of

TABLE 4  
Age and MLU-W of Three Additional Children With Normal  
Language Development Without Clitic Misplacement

	Gender	Age (Months)	MLU-W	PCM
AI	M	28	2.8	0 (0/4)
IP	M	28	3.0	0 (0/7)
OK	F	28	3.0	0 (0/11)

Note. The first number in parentheses refers to the number of misplaced clitics, and the second number is the occurrence of all clitics per individual, both misplaced and correctly placed. MLU-W = mean length of utterance in words; M = male; F = female; PCM = proportion of clitic misplacement.

In conclusion, we feel that with a population smaller than 20 to 30 children we should not express conclusive statements regarding age of acquisition, although we believe that an age between 2;5 and 3;0 is probably a safe guess for the adult clitic placement that concerns us.

### 5.2. A Possible Prosodic Explanation

One may be tempted to relate clitic misplacement to the metrical structure in which clitics surface in Greek and, consequently, attempt to explain it in terms of a prosodic account. It has been suggested, by McGregor and Leonard (1994) for instance, that certain linguistic elements of low phonetic substance, in this case free-standing morphemes, tend to be omitted by children with SLI. Furthermore, omission of free-standing morphemes (e.g., articles, clitic pronouns) in the speech of normally developing children occurs as a function of their position in the phonological phrase (Gerken (1991)). In many of the sentences of our corpus, clitics precede lexical items of strong-weak metrical feet, as in *thelo na to 'fao* 'I want to eat it' or *thelo na sou 'doso* 'I want to give you', in which the clitics to 'it' and *sou* 'you' precede a strong-weak syllable sequence. One can conceivably argue, therefore, that clitic misplacement is related to the position of clitics in the phonological phrase.

Without getting into the implications that such approaches may have for the nature of the deviation involved in SLI, we simply say that at first inspection it does not seem as if they are able to offer satisfactory answers to why children mis-

our study and the Portuguese children that Duarte and Matos reported manifest the same phenomenon when they misplace clitics after the finite verb, and they stop doing so at the same age approximately—that is, around age 3. Notice that prevalent versus postverbal clitic placement as conforming to the finite versus infinitival dimension, respectively, is already acquired at age 2;5 by Italian children who, crucially, do not ever show instances of clitic misplacement even at younger ages (Guasti (1993/1994)). This strengthens our belief that the similarities (between Cypriot Greek and Portuguese) and differences of the two with Italian argue that clitic misplacement, as described in this study, is a phenomenon related with languages of the Tobler-Mussaia type only.

place clitics in Cypriot Greek. This is because we are not dealing with a phenomenon in which clitics are omitted when preceding certain syllable sequences and surface when they follow these sequences (or others). Instead, what we observe is clitics to be somehow displaced in contexts in which they should normally precede some syllable sequence, a prediction that does not follow from the aforementioned approaches when it comes to elements of low phonetic substance, at least not in a straightforward manner.<sup>11</sup>

Similarly, one should also disregard accounts that may attempt to relate later acquisition of proclisis (as compared to enclisis) to less frequent appearance of the relevant contexts in normal adult language or to less frequent production of proclitic environments by children; there is no indication that this is the case—namely, there is no evidence that the environments that force proclisis are less frequent in adult normal language or that they are less frequent in children's language either. We also have evidence from child Italian clitics against a scenario that attributes a crucial role to frequent effects: Although there were far fewer instances of infinitival contexts (compared to finite) produced by children in the corpus studied by Guasti (1993/1994), no errors with respect to clitic placement were attested.

### 5.3. A Syntactic Account

In this section, we show why we believe that the syntactic approach to enclisis presented in section 2 is in a position to answer what underlies clitic misplacement in Cypriot Greek, and at the same time we explain why the phenomenon is strikingly absent from standard Greek,<sup>12</sup> Spanish, Italian, French, and even from Romanian.<sup>13</sup> If we consider finite enclisis a consequence of verb movement to M, clitic misplacement amounts to extensive verb movement to M—namely, to

<sup>11</sup>One is tempted to employ accounts along such lines to explain why the first clitics encountered in Greek child language are those with imperative verbs, as is reported in Stephany (1997). Given that clitics follow the imperative (imp) verb in Greek but precede finite verbs, one would expect them to be robustly omitted in finite contexts with the result that the  $V_{imp}$ -cl sequences are the first to be attested developmentally. Even for this domain, however, one would have to first rule out the possibility that the  $V_{imp}$ -clitic sequences of child language are repetitions of adult orders or commands and hence are produced as unanalyzed units.

<sup>12</sup>Marrinis (2000), referring to Stephany (1997), mentioned four instances of what seem to be misplaced clitics in standard Greek. After examining each one of them in detail, however, he concluded that they present additional complications and therefore cannot be considered manifestations of clitic misplacement.

<sup>13</sup>This pretty much exhausts the spectrum of European languages in which clitics are not subject to first position restrictions. We refer to Romanian in particular because it exhibits a peculiarity concerning placement of the feminine singular clitic *o* 'her'. When *o* occurs in nonperiphrastic constructions, it is preverbal, (i), but must appear postverbally elsewhere, (ii). We thought, therefore, that it presents a potential case for misplacement in children's language.

verb movement past the clitics even when this is prohibited in the adult normal language.

We claim, in fact, that the second step of the finite verb movement illustrated in (5) takes place to a larger extent than necessary in early and SLI Cypriot Greek and the abundant postverbal clitics are a result of this step. Hence, in many contexts, clitics surface in what appear to be misplaced positions, giving rise to the phenomenon we have called clitic misplacement. It follows from this that the reason why no misplaced clitics are attested in languages such as standard Greek, Italian, or Spanish is because the finite verb moves only as high as T. Because the factor responsible for finite enclisis (but also for the deviation with respect to it in early and SLI language) is movement of the finite verb to a position higher than T, the absence of such a step of verb movement from a language signals the absence of the deviation as well.

The question that arises next is why Cypriot Greek children overgeneralize V-to-M movement. Put in different terms, what is it that adult speakers know but children do not, and why, as a consequence of this, do they perform V-to-M movement even in contexts in which it is not allowed by adult language? We say in brief now, and soon elaborate further, that children have not yet grasped certain properties of the functional head M, the target of the finite verb movement. Some empirical support toward this direction is the fact that the children with SLI in our study often omitted *na*, the subjunctive particle that heads M, from their subjunctive sentences, as in the following example from LK:<sup>14</sup>

- (11) (th)elo Δ (zog)raffiso to.  
want-1s (M) paint-1s it-cl  
'I want to paint it.'  
Ad: Thelo na to zografiso.

Another error LK committed was to use the inappropriate negative marker in a number of negative sentences, as illustrated by sentence (9), repeated as (12):

- (i) O vād.  
her-cl see-1s  
'I see her.'  
(ii) Arn vāzut-o.  
have-1s seen-her-cl  
'I have seen her.'

Nevertheless, in her study of 16 monolingual Romanian children with NLD (ages 2;1–5;0), Avram (1999) did not encounter instances of clitic misplacement even with the clitic *o*.

<sup>14</sup>The percentages and actual numbers of omission of *na* per total numbers of subjunctive sentences for the group with SLI are as follows: GK, 12% (4/33); LK, 14% (7/47); FI, 26% (8/30); EF, 6% (2/31); and SK, 28% (9/32). All of the preceding were instances of subjunctives associated with the occurrence of clitics.

- (12) Oi fori ta touta.  
no wear-3s them-cl these  
'(S/he) doesn't wear these.'  
Ad: Oi, den ta fori touta, or, Den ta fori touta.

The negative particle *o(x)i* employed in (12) serves as a substitute for clauses and is also used to negate constituents of verbless utterances in the adult grammar (Mackridge (1985); see also example (8)). Therefore, its use in the previous sentence is illicit for adult normal language in which the corresponding grammatical sentence(s) would be *(Den ta fori touta '(S/he) doesn't wear these' or O(x)i, (den ta fori touta 'No, (s/he) doesn't wear these'. Recall that we have held that both the subjunctive particle and the negative particle are able to check the V-features of M the in adult language, with the result that V-to-M movement does not take place and clitics surface preverbally in the presence of the particles. Thus, the errors in (11) and (12) offer a first indication that children have trouble with this particular domain of sentential structure, which interacts in crucial ways with the movement of the finite verb that is responsible for enclisis.*

5.3.1. *The phrasal status of children's Infl particles.* There are two manners in which children's incomplete knowledge concerning the properties of the functional head M and the inflectional particles that may check its V features can be understood. According to the former, during the stages in which children omit *na* and/or use the inappropriate negative particle, they have not yet realized that the V features of these particles are strong enough to check the corresponding features of M in the overt syntax. Consequently, they continue to operate V-to-M movement even when the particles are present, giving rise to excessive, and illicit, enclisis. All we can say is that we have no evidence that could conceivably support such a working hypothesis.<sup>15</sup>

A more plausible and more interesting alternative line of thinking, as we argue in the remainder of the article, is one that relates children's overgeneralization of V-to-M movement not with the feature strength of the Infl particles but with their status in terms of X-bar structure. According to this line of reasoning, the children of our study performed V-to-M movement in the presence of the subjunctive particle *na* because they consider *na* to be phrasal and in the specifier (Spec) position of MP and hence unable to check the V-features of M. Despite the fact that we do not have direct empirical evidence for the status of *na* being phrasal during the stages at which it is optionally omitted, we seem to have evidence toward this direction from the use (or, more precisely, the misuse) of another Infl particle—the

<sup>15</sup> A reviewer asked what this hypothesis would amount to and, in particular, whether one could assume weak features to be the default setting for early language. We do not think that the study we conducted provides evidence for such a state of affairs. Nevertheless, if we consider strong versus weak features to correlate with overt versus covert movement, default setting for the latter presumably amounts to absence of movement in the overt syntax or else problems with movement in general.

negative particle. To make the relevant points clear, however, a brief presentation of the Greek negative particles is necessary.

As already mentioned in passing, Greek has a number of negative particles. *Den* and *min* constitute sentential negation that is propositional, it is higher than T (at least), and it is considered an X<sup>0</sup> (Giannakidou (1998), Veloudis (1982)). The distributional difference between the two particles can be roughly characterized in terms of *den* occurring in indicative clauses (13) and *min* in subjunctives (14) (however, see the previous references for fine-grained distinctions).

- (13) *Den* taksidevo me treno.  
*den* travel-1s with train  
'I don't travel by train.'  
(14) *Mou* ipe na *min* him-cl bother-1s  
me-cl told-3s M *min* him-cl bother-1s  
'He asked me not to bother him.'

In contrast to the preceding two particles, *oxi* is constituent negation, it is local in the sense of adjoining to the phrasal constituent that provides its scope, and it is phrasal (Giannakidou (1998), Veloudis (1982)).

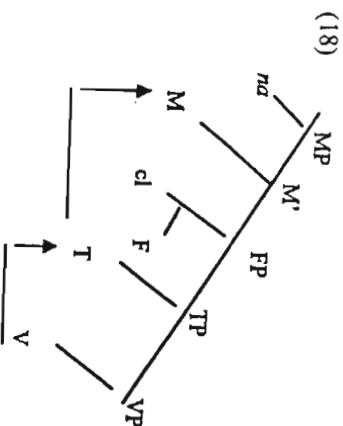
- (15) *Piges* stin Athina? *Oxi*.  
went-2s to-the Athens no  
'Did you go to Athens?' 'No.'  
(16) *Oxi, den* ton ksero.  
*oxi, den* him-cl know-1s  
'No, I don't know him.'  
(17) I Roxani metakornise *oxi* poli kero prin.  
the Roxani moved-3s *oxi* much time ago  
'Roxani moved not long ago.'<sup>16</sup>

On closer inspection of errors such as in (12), we notice that when children misuse the negative particles they employ *oi* (the phrasal negative particle) instead of *den* (the Neg<sup>0</sup> particle) but, crucially, not vice versa. On the basis of this type and direction of substitution error, we claim that at this stage children consider *den* to be phrasal as well, along with *oi*. A result of the phrasal status of the negative particle is that it occupies the Spec(MP) position rather than heading

<sup>16</sup> Although both studies of Greek negation (Giannakidou (1998), Veloudis (1992)) are based on standard Greek, there is no reason to believe that Cypriot Greek is different in this domain; therefore, the claims concerning the status of the negative particles can safely extend to it. We also note the standard Greek *oxi* is pronounced as *oi* by adult Cypriots; hence, *oi* is not a phonological reduction of child Cypriot. Similarly, the standard Greek Neg<sup>0</sup> *den* is pronounced as *en* (along with *den*) in Cypriot.

MP. The  $M^0$  position thus remains empty with the consequence that the finite verb moves to it, resulting in enclisis in the presence of the negative particle in a configuration that is not encountered in adult language.

Subsequently, we extend our claims to the status of the subjunctive particle *na* for the stages during which children (optionally) omit it. We claim in other words that *na* has phrasal status as well in early language, hence, is unable to check the V-features of M. Our claims concerning children's misanalysis of *na* are illustrated in (18), which shows the subjunctive particle in Spec(MP) rather than in the expected  $M^0$  position.<sup>17</sup>



Let us clarify here that it is actually not crucial for our proposal that the misanalyzed subjunctive (or negative) particle occupies the Spec(MP) position. It could have adjoined to MP instead, with the same empirical consequences, and there is no conceivable support for one or the other alternative as far as we can see. This is not an undesirable result, however, because in view of the status of

<sup>17</sup>A legitimate question that a reviewer raised at this point was whether a more appropriate analysis for *na*, during the stages it is optionally omitted, is one in which it is considered as a  $C^0$  by children (when present). Under such an analysis, the  $M^0$  position is still empty; therefore, it can be argued that the finite verb moves to it, giving rise to nonadult enclisis. We should add that the plausibility of such a suggestion increases in view of the fact that it has also been claimed, although much less extensively and uncontroversially so, that *na* is a  $C^0$  in (adult) Greek (Agouraki (1991)). In light of further inspection of the data of those children who omitted *na* from their sentences, we believe this is probably not the direction in which their misanalysis of *na* takes place, however. Specifically, we found that in none of their sentences did these children employ the uncontroversial complementizer *oti*—namely, the complementizer that introduces indicative subordinate clauses in adult grammar. We consider it implausible, therefore, that they perceive the  $C^0$  position as able to host *na* during stages in which it does not seem to be hosting *oti*. Hence, we feel more comfortable with proposing a uniform behavior of *na*, along with that of other Infl elements such as the negative particle, and therefore consider it a phrasal specifier or adjunct above TP rather than the head of a higher projection, in particular,  $C^0$ . It is interesting that the head status of *na*, along with other modal particles, has been debated on the basis of historical evidence primarily by Christidis (1990), as was pointed out to us by D. Theopoulou-Kontou (personal communication, April 2001).

specifiers and adjuncts in current syntactic theory (Chomsky (2000), Kayne (1994)), the two alternatives become possible and equivalent on theoretical grounds as well. At the same time, the phrasal status of the particles alone is able to explain why these cannot check the V features of M, regardless of their precise position: Under standard assumptions, phrases are typically able to check N(ominal) but not V features.<sup>18</sup>

The proposal concerning the phrasal status of the subjunctive and negative particles is also in line with ideas of K. Wexler (personal communication, May 1999), according to whom at early stages of language development children seem to perceive as phrasal a number of inflectional heads that are not suffixes on the verb. This, for instance, seems to be the behavior manifested by Swiss German children when they perform V-second in embedded clauses (see (19) from Schönenberger (1995)).

- (19) Ich zeig der was han ich gseh.  
I show you what have I seen  
'I show you what I have seen.'  
Ad: Ich zeig der was ich gseh ha.  
(Schönenberger (1995, 425))

Schönenberger in fact claimed that in examples such as (19), *dass* is not in  $C^0$  but in Spec(CP) and *bi* has moved to  $C^0$  in a typical instance of V-second.

Moreover, English-speaking children's early negative questions, as in (20) from Guasti, Thornton, and Wexler (1995), appear to behave along similar lines.

- (20) What did he didn't want to bring to school?

According to K. Wexler (personal communication, April 2000), sentences such as (20) can be understood if we consider "n't" to be perceived as phrasal by children, a result of which is that it is not picked up by "did" on its way to  $C^0$  (see also Nunes (1999) for a discussion of the latter sentence from a different but not incompatible angle).

Finally, there are also conceptual reasons to prefer an account of clitic misplacement according to which Infl particles do not occupy the adult  $M^0$  position: If one is willing to accept that children know that the language faculty does not allow operations such as right adjunction (Kayne (1994)), then illicit orders such as *na-V-cl* (illustrated by examples such as (7) from SLI Cypriot Greek) can surface only if *na* did not dominate  $M^0$ . If *na* dominated  $M^0$  in (18), only with right

<sup>18</sup>Marcel den Dikken (personal communication, March 2000) brought to our attention that the (phrasal) adjunct status of some functional heads has also been proposed by Hoekstra and Jordens (1994) for Dutch child language on independent grounds. It is beyond the scope of this article to go through the explicit and implicit similarities and differences between the two accounts.

adjunction of the verb to  $M^0$  would surface orders such as in (7), repeated as (21), be obtained.

- (21) a kolisume ta            Δ           tetradio mou.  
 M stick-1p them-cl (on-the) notebook my  
 'To stick them on my notebook.'  
 Ad: Na ta kolisume sto tetradio mou.

In conclusion, we have claimed that the children who produce misplaced clitics in Cypriot Greek have problems with the inflectional particles that in adult language are able to check the V-features of M and render finite V-to-M movement (hence, enclisis as well) impossible. By considering these particles phrasal specifiers or adjuncts, children are unable to check the V-features of M and thus perform verb movement to M despite the presence of the particles, giving rise to the word order V-cl that is illicit for adult normal language.

It emerges, therefore, that our proposals consider the phenomenon of clitic misplacement as the side product of verb movement past the clitics rather than the consequence of some process that involves (movement or some other properties of) clitics per se. Because no comparable finite verb movement takes place in languages other than Cypriot Greek (and Portuguese), clitic misplacement of the sort we have described is not expected to be attested.<sup>19</sup> Finally, the finite verb movement we have described is intimately related to the misanalysis of the Infl particles as phrasal by children. This type of misanalysis, concerning Infl primarily, seems to be manifested in other early languages and in other syntactic environ-

<sup>19</sup>A question that arises at this point is why children do not misplace clitics across the infinitival versus finite contexts of Romance languages such as Spanish and Italian. A complete answer to this question is consistent with our proposals. In brief, it may be that the infinitival verb movement that gives rise to enclisis in Spanish or Italian is of a different nature and has a different landing site than the movement of the finite verb in Cypriot Greek (and presumably Portuguese as well). Most crucial, under no circumstances is the infinitival verb movement of Spanish or Italian prohibited from taking place by some other element that is also able to satisfy the requirements of the attracting functional head. This is an important difference between the infinitival verb movement that gives rise to enclisis in the aforementioned languages and the finite verb movement that we have been discussing in this article, a difference that is not shared by other contexts involving clitics as far as we know.

For this reason, cases such as those of Italian negative imperatives are less pertinent to our discussion:

- (i) Non farlo!  
 'neg do-Infn it'  
 (ii) Non lo fare!

This is so because either position of clitics is possible in the preceding constructions (a fact that has led Kayne (1992) to analyze (ii) as an instance of clitic climbing with the infinitive embedded under an empty auxiliary); thus, no misplaced clitics are expected to arise on these grounds either.

ments as well, with different manifestations in the overt syntax than those of Cypriot Greek.

If we are right in proposing the aforementioned, it seems that all children have to learn to attain the adult stage of clitic placement is the properties of the Infl elements—namely, that these are not phrases but heads of corresponding projections. By contrast, if the account of Duarte and Matos (2000) is on the right track, children must learn that clitics move to a preverbal position when attracted by some element with certain weight and thus must figure out what exactly this weight amounts to first. More important, however, they also must learn that clitics, despite being affixal, are able to move independently (to this preverbal position). Put in slightly different terms, according to the account we advocate, children learn the basic grammatical properties of clitics quickly (as it has been observed to be the case in many languages), and what remains for them to do is reanalyze the Infl elements as occupying the  $M^0$  position. Duarte and Matos's claim, on the other hand, implies a more radical reanalysis, one that involves learning the properties not only of the attracting elements but also of the clitics.<sup>20</sup>

A more interesting set of facts for our claims are those discussed by Zanuttini (1997, 40), from Paduan:

- (iii) Te magni.  
 subj.cl eat  
 'You eat.'  
 (iv) Cosa magni-to?  
 what eat-subj.cl  
 'What do you eat?'

Even the previous examples, however, do not constitute a paradigm such as the one of Cypriot/Portuguese in the sense of two different elements being able to satisfy the requirements of the same functional head in the way we have described. The prediction, therefore, is that we do not expect to encounter misplaced clitics in these structures either. As C. Poletto (personal communication, June 2001) informed me, when children are in error, they employ a proclitic option for (iv) rather than vice versa, and she believes that this is so because of a gradual loss of the enclitic order that seems to be taking place in her dialect (at least).

Finally, we should mention that Berber is a language in which clitics are subject to position restrictions apparently similar to those of Cypriot/Portuguese (Ouhalla (in press)), but not much is known about child language, let alone SLI (Ouhalla (personal communication, March 2001)). It seems to us, therefore, that although the survey across languages with finite enclisis of the Tobler-Mussaïfa type is certainly incomplete, the data available so far do not falsify the putative generalization that only in this type of early and SLI languages are misplaced clitics most likely to be encountered.

<sup>20</sup>Duarte and Matos (2000) held that the problem children have with proclisis in Portuguese is a problem with movement of clitics (to the preverbal position). A manner in which their claim can be evaluated is by comparing in Portuguese illicit enclisis of the type discussed with clitic climbing, an optional phenomenon that involves movement of clitics as well and is known to be present in Italian children at about age 2;7 (Guasti 1993/1994, 14–15).

Comparable comparison cannot take place in Cypriot Greek because the language has neither infinitival forms nor clitic climbing, a phenomenon usually associated with infinitives.

## 5.4. Comparing the Two Populations

**5.4.1. Clitic misplacement as a clinical marker.** One of the purposes of this study was to compare the normally developing and the SLI Cypriot Greek group of children with the hope of identifying a clinical marker for SLI in the language. The comparison of the two groups in Table 3 revealed that the children with SLI produced postverbal clitics in all their sentences, in contrast with the children with NLD whose clitic misplacement varied. It is tempting to propose, therefore, that across-the-board clitic misplacement may serve as a clinical marker for SLI in Cypriot Greek, bearing in mind that a larger pool of participants may be necessary to establish a convincing proposal. Unlike with the age of acquiring finite enclisis, however, we believe that in this case even this small group of children we tested is reliable—first because the pattern they manifest is invariable, and second because the same invariable pattern in terms of across-the-board clitic misplacement was manifested by about 10 more children, ages 3;6 to 5;0, who were referred to Kakkia Petinou for language therapy and were diagnosed with SLI on the basis of the criteria we described in footnote 6.

**5.4.2. Additional differences.** A difference between the two populations we studied is that although the children with SLI show a significant percentage of subjunctive marker omission (see footnote 14), none of the study children with NLD omitted the subjunctive particle. Furthermore, only 1 out of the 5 children with SLI in the study used the inappropriate negative marker, as we noted in the previous section. With respect to the remaining 4 children, 2 did not produce negative sentences in the data we collected, and the remaining 2 did not use the negative particle incorrectly in their negative sentences. On the other hand, none of the children with NLD in our study made the wrong choice of negative particle. It seems at first glance, therefore, as if the omission of the subjunctive particle and a (less extensive) misuse of the negative particle (behavior we have crucially related with clitic misplacement) are a set of properties that characterize the group with SLI exclusively. If true, this fact could conceivably argue for qualitatively different patterns of development between the two groups.

This does not seem to be the case, however, because a more careful look at early normal language reveals that the subjunctive particle is also omitted by children with NLD and that *oxi* is also used instead of *den*. In particular, Stephany (1997) reported that *na* is either omitted or reduced to a schwa by children, and its adult use does not occur until the age of 28 to 34 months in standard Greek. Therefore, it is probably only a coincidence that the children with NLD in our study did not omit *na* in the language samples we collected. As for the use of the negative particles, Stephany (1997) also reported that it appears to be stabilized around age 2;4, that is, somehow earlier than the children we have tested. Therefore, the conclusion we can safely draw is that the two populations did not differ qualitatively in this respect; thus, our study did not provide evidence for two patterns of devel-

opment, employed by the populations with NLD and those with SLI with respect to the *Infl* particles.

However, the facts we discussed in section 5.4.1 can also argue for a qualitatively different behavior between the two populations: As can be seen even from a quick glance at Tables 2 and 3, children with SLI go through a period during which all their clitics surface in nonadult (postverbal) position. On the other hand, under no circumstances did the children with NLD that we tested manifest across-the-board clitic misplacement. We add here that to have a better picture of the correlation between the omission/misuse of *Infl* particles and clitic misplacement, we undertook an explicit search for children with NLD who misplaced their clitics across-the-board. We were unable to discover such a child, however. In other words, as soon as children with NLD started to produce clitics, they misplaced some of them but never all.

This persistence of children with SLI in terms of the relevant error can be considered to constitute a different developmental pattern because, although it is in fact simply a quantitative difference, it is at the same time a pattern that is not manifested by the normally developing children. We tend to believe that children with NLD also go through a stage of across-the-board clitic misplacement, but they go through it so quickly that it is extremely difficult to capture. Nevertheless, we do not think this takes away the burden of what it means for two populations to differ so sharply and whether one finds comparably sharp differences between populations with NLD and SLI in other domains of grammar, but we leave this issue open.

## 6. CONCLUSION

In this work, we studied a group of Cypriot-Greek-speaking children with SLI and a group of Cypriot-Greek-speaking children with NLD with the aim of understanding the factors that underlie frequent misplacement of clitics in their language, a phenomenon that had not been noticed to exist in early and SLJ language before.

We claim that clitic misplacement is not a problem children have with clitics but a consequence of a misanalysis of the status of a number of *Infl* particles that are standardly considered to be functional heads in adult normal grammar. We proposed that children misanalyze the relevant particles as phrasal, hence, are unable to check the V-features of M (a functional head above T). They subsequently perform finite V-to-M, employing the alternative mechanism available to satisfy the feature checking requirements of M. Because, unlike in adult language, however, verb movement takes place in the presence of the particles, it produces illicit order of finite verb and clitics, giving rise to the phenomenon we have identified as clitic misplacement.

We reported that children's problems with the *Infl* heads are not limited to Cypriot Greek. English- and Swiss-German-speaking children appear to have

problems with Infl heads in other domains of the sentential structure, but different consequences follow for early language. Similar problems are presumably also present in standard Greek, as the findings in Stephany (1997) suggest, but they go unnoticed, as they do not have observable effects in early or SLI syntax. One excellent comparable problem to also exist in the various Romance languages, at least without consequences for the position of clitics, with the interesting exception of Portuguese. Whether the phrasal status of early functional heads is limited to Infl heads (or, more accurately, the extended projections of the verb) or includes other functional heads as well is an issue that deserves attention.<sup>21</sup> The reasons behind children's misanalysis of functional heads and what they tell us about language is also an issue for investigation, especially within a framework in which the X<sup>0</sup> versus XP distinctions of X-bar structure we have employed are reanalyzed in more primitive relations (Chomsky (1995) and subsequent work).

Finally, this article is a case study of a language and a phenomenon in which no qualitatively different developmental patterns were detected for the early and the SLI populations, a finding that supports in principle the line of research that considers SLI an instance of language delay rather than a language disorder. However, the sharp quantitative differences between the two groups is an issue that deserves attention within a broader context of what constitutes a qualitative difference and hence a different developmental pattern.

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<sup>21</sup>It is worth noting here that Cardinaletti and Starke (1995) hinted toward the phrasal status of weak pronouns in children's language.

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