Developments in the Acquisition of Clitics

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Edited by

Kleanthes K. Grohmann and Theoni Neokleous

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LIST OF ABBREVIATIONS

±interp	interpretable
1SG	1st person singular
2SG	2nd person singular
3SG	3rd person singular
A	advanced (learner group)
ACC	accusative
Adv	adverb
AdvP	adverb phrase
AG	age group
AGR/Agr	agreement
AGRP/AgrP	agreement phrase
AGRO/AgrO	agreement-object
AGROP/AgrOP	agreement-object phrase
AGRS/AgrS	agreement-subject
AGRSP/AgrSP	agreement-subject phrase
ATOM	Agreement Tense Omission Model
AUX	auxiliary
B	beginner (learner group)
C	complementizer
CAT	Cyprus Acquisition Team
CG	Cypriot Greek
CG-V	CG-specific verb
CHILDES	Child Language Data Exchange System
CII	Clitics-in-Islands tool
CII-L	Clitics-in-Islands tool (long version)
CII-S	Clitics-in-Islands tool (short version)
CL/Cl	clitic
ClD	clitic doubling
CLOS	clitic-omission stage
ClP	clitic phrase
CP	complementizer phrase
CSG	Cypriot Standard Greek
D/DET	determiner
D-linking	discourse-linking
DAT	dative

DM	Distributed Morphology
DO	direct object
DP	determiner phrase
DVIQ	Diagnostic Verbal IQ Test
EOI	Extended Optional Infinitive
EP	European Portuguese
EPP	Extended Projection Principle
EXCL	exclamative
F	female
FEM	feminine
GEN	genitive
H	High (sociolinguistic status)
I/INFL	inflection
IMP	imperative
IO	indirect object
L	Low (sociolinguistic status)
L1	first language
L2	second language
LF	Logical Form
LI	lower intermediate (learner group)
M	masculine *or* male *or* mean
MASC	masculine
MLU	mean length of utterance
MV	Minimize Violations
N	number
NEG	negation
NOM	nominative
NP	noun phrase
NR	no response
NS/OI	Null-Subject/Optional Infinitive Correlation
O/Obj	object
O (feature)	old information (feature)
OI	optional infinitive
P2	second position
P5;6 … P67	participant + age (years;months)
PCC	Person Case Constraint
PL	plural
Post-V	post-verbal
PPPC	Production Probe for Pronoun Clitics tool
Pre-V	pre-verbal
PRES	present

Q	question
R–CG	Russian–Cypriot Greek
REF/Ref	Reference
Rural_L	Rural area Clitics-in-Islands tool (long version)
Rural_S	Rural area Clitics-in-Islands tool (short version)
SC	Serbo-Croatian
SD	standard deviation
SG	singular
SLI	specific language impairment
SMG	Standard Modern Greek
SMG-V	SMG-specific verb
SPE-CG	Syntactic Priming Experiment in Cypriot Greek
Spec	specifier
SSDH	Socio-Syntax of Development Hypothesis
Subj	subject
T/TNS	tense
TD3–4	typically developing 3- to 4-year-olds
TD5	typically developing 5-year-olds
TOP	topic
TopP	topic phrase
TP	tense phrase
UCC	Unique Checking Constraint
UG	Universal Grammar
UI	upper intermediate (learner group)
Urban_L	Urban area Clitics-in-Islands tool (long version)
Urban_S	Urban area Clitics-in-Islands tool (short version)
V	verb
V2	verb second
VA	very advanced (learner group)
VEPS	Very Early Parameter-Setting
VOS	Verb–Object–Subject (word order)
VP	verb phrase
VSO	Verb–Subject–Object (word order)
Wh	*wh*-question
WOCG	Word Order and Clitics in Greek

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INTRODUCTION

The present volume presents new theoretical and empirical findings on the acquisition and development of clitics in and across different languages. It emerged from the CYCL1A Workshop on the Acquisition of Clitics held in Nicosia (25–26 May 2012), which was organized as part of the Young Researchers project "L1 Acquisition of Cypriot Greek Pronominal Clitics" (ΠΕΝΕΚ 0609/42, Cyprus Research Promotion Foundation), investigated by Theoni Neokleous under the direction of Kleanthes K. Grohmann (Cyprus) and the supervision of Teresa Parodi (Cambridge).

This workshop brought together researchers working on clitic acquisition. Since not all participants could contribute to this volume (but see also Grohmann and Neokleous, to appear), we solicited additional relevant research papers beyond the workshop. The invited speakers, João Costa, Maria Lobo, and Teresa Parodi, as well as Kleanthes K. Grohmann, Enkeleida Kapia, Sviatlana Karpava, and Elena Papadopoulou presented their papers at the CYCL1A Workshop, while Vina Tsakali, Marina Agathocleous, and Alexandra Charalambous were among the participants; the book also includes a contribution by Spyridoula Varlokosta, Katerina Konstantzou, and Michaela Nerantzini. In addition, we are proud to be able to include a paper by Ken Wexler which he presented at a conference on specific language impairment (SLI) in Paris in 1997, revised in 2002, but never published, even though it has been cited numerously since as some variation of Wexler (1998b) — but now finds a natural and complete citation. This final chapter of the volume also contains a long preface explaining its long history.

In total, this volume features ten papers that explore issues pertaining to the first (L1) and second language (L2) acquisition of clitics in (a)typically developing child populations. There is an emphasis on Cypriot Greek, a language that exhibits both proclisis and enclisis in finite contexts resembling in this respect European Portuguese. The first four chapters discuss mono- and bilingual acquisition of clitic pronouns in Cypriot Greek (CG), the two subsequent chapters deal with Standard Modern Greek (SMG), the three contributions that follow focus on Albanian, Serbo-Croatian, and European Portuguese, respectively, and the last chapter of this volume is a paper on the Unique Checking Constraint as an explanation of clitic omission in normal and SLI development.

In the first chapter, **Kleanthes K. Grohmann** culminates the research activities of the Cyprus Acquisition Team (CAT) on object clitic placement by different Greek-speaking populations residing in Cyprus. The CAT has employed the COST Action A33 Clitics-in-Islands tool in both its longer (aimed to elicit a verb–clitic sequence in a *because*-clause) and shorter version (in a simple declarative) for the elicitation of 3rd person singular accusative object clitics. Grohmann reports administration of the test to over 700 children from the following groups: CG-speaking bilectal children (native in CG but also acquiring SMG), Hellenic Greek children (native in SMG but residing in Cyprus), binational children (native in both SMG and CG), and bilingual children (acquiring CG and Russian as well as SMG), all of which had typical language development, as well as to a group of CG-speaking children diagnosed with SLI. Given that 2- to 4-year-old children and adults predominantly produce enclisis in these contexts, the mixing of proclisis and enclisis as well as the ample production of proclisis in 5- to 8-year-olds is interpreted within the Socio-Syntax of Development Hypothesis, attributing the mixing of CG and SMG to schooling, since formal instruction in Cyprus is offered in the standard variety.

In chapter two, **Marina Agathocleous, Alexandra Charalambous, Elena Papadopoulou, and Kleanthes K. Grohmann** expand on that line of research and investigate whether the urban vs. rural living environment has an effect on clitic placement. They also carried out the COST Action A33 Clitics-in-Islands tool in both its longer and shorter version with 360 Greek Cypriot children aged 4 to 6 years from urban and rural areas of Cyprus. Their findings reveal the pre-dominance of post-verbal clitic placement in all populations apart from children from Paphos (only in the longer version), while this preference is even sharper in the shorter version. They further test teenagers (aged 14 to 18 years) and adults (aged 30 years and up). The former group manifests post-verbal placement alone, while the latter produces both pre- and post-verbal clitics, which highlights the sociolinguistic component of clitic placement.

Chapter three, by **Sviatlana Karpava and Kleanthes K. Grohmann**, investigates object clitic production in 18 Russian–CG bilingual children aged 4;8 to 7;8 using two tools: the Production Probe for Pronoun Clitics tool (Tuller et al., 2011) for the elicitation of verb-clitic clauses and the Clitics-in-Islands tool (COST Action A33, 2006–2010) for the elicitation of *because*-islands structures. The results from the implementation of each tool differ: The latter elicited more clitics than the former. As for non-clitic production, the former elicited more null objects, while the latter elicited more NPs. The authors interpret this finding within the

Interpretability Hypothesis (Tsimpli, 2001) and the feature specification approach (Dimitrakopoulou et al., 2004), claiming that, due to transfer from Russian, Russian–CG bilingual children misanalyze CG clitics and interpret them as weak pronouns, while they occasionally omit them, since the syntactic *wh*-question/answer environment in Russian triggers object drop. With respect to clitic placement, the PPCC tool elicits more enclitics and the CII more proclitics, while the production of proclisis increases at schooling ages.

Elena Papadopoulou, Evelina Leivada, and Natalia Pavlou use an on-line experiment to investigate syntactic priming in 157 adult Cypriot Greek (CG) focusing on clitic placement in declaratives. They test what is the preferred pattern for CG and SMG clitic structures and whether Greek Cypriot adults are primed as for the choice of proclisis or enclisis in the target structure in the one variety when primed with the other. The authors observe that pre-verbal clitics in CG declaratives are only produced when primed, while post-verbal clitics showed a less significant effect of priming, while the greatest variation within non-target placement is found in the SMG version of the task.

In the first part of chapter five, **Vina Tsakali** summarizes recent findings of a number of developmental studies with respect to clitic (mis) placement, differences in the acquisition of direct and indirect object clitics, and the acquisition of the Person Case Constraint. In the second part, she proposes that typological differences with respect to clitic omission in child language can be more adequately explained by theories assuming a lack of maturation in the syntactic computational system. She argues that the Unique Checking Constraint (Wexler 1998a) restricts children's computational system. Following Tsakali and Anagnostopoulou (2008), she proposes that phi-features cannot undergo split checking against two functional categories in child grammar. Thus, clitic omission only occurs in split agreement languages, where *pro* needs to check features on two heads (AgrO and Cl), but not in bundling/clitic-doubling languages, where clitic-dependencies are exhaustively licensed by a single checking relation (the object checks features against Cl).

Spyridoula Varlokosta, Katerina Konstantzou, and Michaela Nerantzini explore clitic acquisition in (a)typical populations and argue that clitic production cannot always be used as a clinical marker for language impairment, as well as that task selection can affect children's production of clitics. They administered two elicitation tasks, the COST Action A33 tool and the COST Action IS0804 tool, both eliciting 3rd person singular direct object clitics, in a group of 5 children with SLI and in two control groups comprised of 10 and 55 typically developing

children, respectively. They report lower clitic production in the SLI group as compared to the typically developing groups, even though this difference is not significant. The task effect is revealed in the performance of the larger group of typically developing children as their performance in the COST A33 task is significantly higher than in the COST IS0804 task.

In chapter seven, **Enkeleida Kapia** investigates dative and accusative clitic doubling realization in child Albanian on the basis of experimental (40 children aged 2;0-4;0) and naturalistic data (12 children aged 2;0-4;0). The results of both studies show that Albanian children clitic double dative arguments with adult-like accuracy from age 2 onwards, a result that is also interpreted within Wexler's (1998a) Unique Checking Constraint. The main finding of the study, however, is the dissociation between the development of syntax and pragmatics in Albanian, with syntax being fully in place by age 2 and pragmatics not fully matured even at age 4. Evidence for this is offered by their doubling of dative versus accusative objects: The former are always clitic doubled, while the latter are clitic doubled only when they are topical. Albanian children always clitic double dative objects, as required, while they not only clitic double topical objects but overproduce clitics in *rhematic/kontrastive* constructions as well. Kapia attributes this overproduction of clitics to an underdeveloped discourse–pragmatics module and particularly to the fact that children take more referents in the discourse context to be 'old information' as compared to adults.

Teresa Parodi and Nadežda Novaković explore the L2 acquisition of Serbo-Croatian clitics in two groups of participants, 44 French and 48 English learners, grouped in five proficiency levels (beginners, lower intermediate, upper intermediate, advanced, and very advanced). They discuss two aspects of clitic acquisition in Serbo-Croatian. Firstly, the acquisition of the category of clitic pronouns, which is not existent in English as opposed to French, and, secondly, the acquisition of the P2-property, with the raising of the clitic cluster to FP. The occurrence of post-verbal clitics in English learners at lower proficiency levels reveals that initially clitics are categorized as strong pronouns, whereas French learners perform target-like from the onset. The separation of the clitic from the verb, achieved by both groups of learners, offers an indication that learners are aware of this parameter. As regards embedded clauses, where the complementizer is followed by the clitic cluster, both groups seem to develop at the same pace: They produce this type of structure at the advanced level, with the ungrammatical options disappearing only at the very advanced level in learners living in a SC-speaking environment. These results are interpreted within the Interpretability Hypothesis

(Tsimpli and Dimitrakopoulou, 2007; Tsimpli and Mastropavlou, 2008) in the sense that uninterpretable features not activated in the L1 (the P2 parameter for both English and French) are not learnable in the L2.

In chapter 9, **Maria Lobo and João Costa** address an interesting cross-linguistic difference in the L1 acquisition of null arguments in Japanese and Portuguese. Whereas Japanese children by age 5 appear to be adult-like in the interpretation of null subjects and null objects (Sugisaki, 2009), this does not hold of Portuguese children. The authors test 20 typically developing monolingual children acquiring European Portuguese aged 5;0–5;10 and argue that a more uniform system in which both null subjects and null objects are variables (like Japanese) develops faster than one in which the null subject is a *pro* and the null object is a variable (like European Portuguese). In line with the Uniformity Principle (Chomsky, 2001), they indicate that Portuguese children originally assume a uniform analysis for null subjects and null objects and in order to tease them apart, they have to figure out the different properties of the T-head as compared to the *v*-head. The discussion contributes to the current debate on empty categories suggesting that complexity and language-internal variability may induce slower acquisition processes.

Lastly, **Ken Wexler** applies the Unique Checking Constraint (UCC) for explaining the issue of clitic omission in normal and SLI development. The baseline for the proposed analysis is that the Agreement/Tense Omission Model (ATOM) is the ultimate description of most of the facts concerning verb, subject case and word order properties in the Optional Infinitive (OI) stage. Wexler proposes that the ATOM derives from the UCC, which states that the D feature of DP can only check against one functional category. Wexler applies the UCC to Romance clitics in order to explain acquisition data. He specifically adopts a movement theory of clitics, according to which clitics are generated in object position and move to check a [–interp(retable)] D-feature on AgrO and then a [–interp] D-feature on INFL, in particular on REF(erence). Four possible options are thus available in child grammar: (i) an adult-like structure; (ii) a structure with AGRO missing, hence with default case, but correct word order; (iii) a structure with the object clitic missing, which is for the child a structure with an AGRO [+interp] D-feature; and (iv) a structure with the old information O-feature missing. Empirical data from normal language development (from early French, Italian, Dutch, and Czech) concerning the placement, use and omission of Romance clitics, as well as data from French and Italian SLI are provided to support the UCC theory concerning pronominal object clitics, which underlies the OI stage in normal language development and the Extended OI stage in SLI.

This volume is meant to constitute a valuable reference guide for current work on the acquisition of clitic pronouns. We would like to thank all contributors to the volume, the Cyprus Research Promotion Foundation for funding the CyCl1A Workshop on the Acquisition of Clitics, and Carol Koulikourdi from CSP for her helpful support throughout.

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Theoni Neokleous and
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CHAPTER ONE

CAT RESEARCH ON OBJECT CLITIC PLACEMENT: WHERE WE ARE NOW*

KLEANTHES K. GROHMANN

1. Introduction

Just as the talk that ended up published as Grohmann (2011) was the first public presentation of our clitic research, the presentation that lent itself to the present chapter marks the present culmination of that phase of research activities. The Cyprus Acquisition Team (CAT) set itself no smaller task than to get "engaged in all kinds of research activities pertaining to first and second language acquisition in monolingual and bilingual typically developing and language-impaired children aged anything from around 2 to 7" and to also "investigate[e] older children and teenagers for particular aspects of language" (http://www.research.biolinguistics.eu/CAT/research.html; see also Grohmann, 2011: 181). Our paradigmatic example of an area of language that allowed us to get a glimpse of the acquisitional and developmental intricacies for all these populations in Cyprus has been up to now object clitic placement by (Cypriot) Greek-speaking children.

* I would like to thank the members of the Cyprus Acquisition Team for making all of this happen in the first place. In particular, I would like to express my deep gratitude to all the student and research assistants that carried out the many clitic testing sessions over the years: Marina Agathocleous, Alexandra Charalambous, Polyxeni Charalambous, Anna Epistithiou, Skevi Hadjiefthymiou, Svetlana Karpava, Antonis Koudellaris, Skevi Mavroudi, Natalia Pavlou, Dimitris Solomou, and Elena Theodorou as well as Evelina Leivada for Greek and Silvia Martínez-Ferreiro for Galician. Thanks for the many discussions that went into this chapter go out to the CYCL1A Workshop on the Acquisition of Clitics participants as well as Maria Kambanaros, Svetlana Karpava, Evelina Leivada, Theoni Neokleous, Charley Rowe, Elena Theodorou, and especially Lena Papadopoulou.

The starting point was COST Action A33 (2006–2010), for which 5-year-old children across Europe(an languages) were tested on a wide range of morphosyntactic comprehension and production abilities. Looking at the acquisition of object clitic production, we wanted to learn how Greek Cypriot children performed. Building on the only existing study at the time (Petinou and Terzi, 2002) and what is known about the acquisition of clitics in Standard Modern Greek (e.g., Marinis, 2000), no problems were expected for production. However, what we did observe were apparent inconsistencies in terms of clitic placement, in particular by comparing younger with older children (namely, children aged 3–4 vs. 5–6). This was first reported in Grohmann (2011) and picked up in much subsequent CAT research. Throughout this line of research, many different groups of child populations were assessed on the same tool. One goal of this prolonged testing period was to find explanations along the lines of the Socio-Syntax of Development Hypothesis (Grohmann, 2011), that is, that a 'schooling factor' might be profoundly involved in the development of the children's grammar (i.e. even past the 'critical period'), possibly in combination with 'competing motivations' (Grohmann and Leivada, 2012, in press).

This chapter aims to provide a comprehensive overview of the results from all these studies — but it should be read side by side with my joint contributions stemming from the CYCL1A Workshop on the Acquisition of Clitics with similar methodology, Agathocleous et al. (this volume) on possible sociolinguistic factors, and Karpava and Grohmann (this volume) on bilingual children, but also Theodorou and Grohmann (to appear) on children with specific language impairment.

2. Background

Our research deals with one aspect of Cypriot Greek grammar in which the variety differs from the official Greek language of Cyprus, which is the same as in (the Hellenic Republic of) Greece: Demotic Greek or, as known to linguists, Standard Modern Greek. This section provides some essential background on the sociolinguistic state of Greek in Cyprus, its role for language acquisition and development, and the most relevant difference in the grammars of the two varieties, namely object clitic placement.

2.1. Discrete Bilectalism: Sociolinguistic Aspects of Diglossia

The Greek-speaking part of Cyprus has traditionally been identified as a state of diglossia (Newton, 1972), in the sense of Ferguson (1959), but also including the extensions provided by Fishman (1967); for a variety of

relevant issues, see, for example, the more recent review article by Hudson (2002) and, from the perspective of Cyprus, Arvaniti (2006b). More in-depth discussion and related references can be found in Grohmann and Leivada (2012) or Rowe and Grohmann (2013), among others, which the remainder of this section liberally draws from.

Under the diglossic take on the language situation of Greek-speaking Cyprus, the sociolinguistically 'High' variety H is the official language of the country, Standard Modern Greek (henceforth, SMG), while the native variety, Cypriot Greek (CG), enjoys the status of the 'Low' L. If this were the end of it, Greek Cypriots should be native speakers of CG, an uncodified linguistic variety without its own official orthographic system, who also speak SMG, the full-fledged language.

However, it is not. For the past two decades or so, researchers have engaged in heated debates over a precise description of the Greek Cypriot speech community. Other than diglossia (e.g., Arvaniti, 2006b), it has been described as "former diglossic" in a standard-with-dialects (Karyolemou, 2006) or language/dialect continuum situation (Katsoyannou et al., 2006) and as bidialectalism (Papapavlou and Pavlou, 1998; Yiakoumetti et al., 2005; Tsiplakou et al., 2006). In addition — with reference to English (widely spoken in this former colony) and Turkish (the other official language of the country, according to article 3 of the constitution of 1960) — the linguistic situation in Cyprus has been characterized as bilingualism (in SMG and CG; Newton, 1972; Vassiliou, 1995) and even trilingualism (in Greek, Turkish, and English; Arvaniti, 2002). Note that Vassiliou does not explicitly argue for bilingualism but quotes Newton's view that certain groups of CG speakers develop "fluent bilingualism"; she also argues that there is no mutual intelligibility between speakers of SMG and CG. As we further note (Grohmann and Leivada, 2012), "Arvaniti (2006[b]: 26) also assumes unintelligibility 'without adequate previous exposure', despite the fact that she attributes to CG the term 'dialect' and not 'language'", though Arvaniti's stance "is not identical with Vassiliou's, since [she] suggests that unintelligibility is not mutual, but one-way" (p. 243). In fact, while the characterization diglossic "appears clear to some researchers […] it is not shared by all; many scholars describe the linguistic situation in Cyprus as a 'dialectal continuum' of some sort […] or as bidialectalism" (p. 26). We continue (p. 244): "[D]diglossia should at least potentially be disjoint from bilingualism; hence, there should be no issue of whether the linguistic reality of Cyprus entails one or the other for some researchers. The terms 'diglossia' and 'diglossic' refer to and describe the sociolinguistic situation, respectively, and not speakers' performance. Therefore, speakers can only demonstrate bilingualism, not diglossia."

Rowe and Grohmann (2013) note that an important distinction for identifying a society as diglossic should be the native speaker test (Keller, 1982), as diglossia is a social construct and not merely a structural notion. Truly diglossic societies should thus have no critical mass of native-born H-speakers that grow up speaking L in typical L-environments (e.g., the home). The direct implication is that there should be no native speakers of H (SMG) in the diglossic society (Cyprus), or at least not a critical mass. This seems to be the case. In addition, any further stratification would be more discrete for H and L, which would occur mostly in an urban mesolect — and this, too, may be the case, as witnessed by the notion of 'Cypriot Standard Greek' introduced by Arvaniti (2002) or a Cypriot Greek *koiné* (Tsiplakou, forthcoming).

On the broad scale of sociolinguistic classifications, we should perhaps move beyond designating Greek-speaking Cyprus as 'regular' diglossia in the typically understood sense of "functional differentiation" of SMG and CG as H and L, respectively (Arvaniti, 2010: 20). One could also label it a state of *type B diglossia*, on the way to dialect moribundity, possibly with *diaglossia* as an intermediate stage (see Auer, 2005: 34). We expand on this notion in Rowe and Grohmann (2013), where we also address the issue of (overt, covert, or, as we argue, co-overt) prestige.

With Grohmann (2011), we started adding to the debate by introducing our umbrella term 'bi-*x*', meant not only as a descriptive cover to capture this terminological confusion but also to bring together a range of largely sociological, but also linguistic, factors that determine the context-specific character of language acquisition and development in the particular case of Cyprus (for more, see Grohmann and Leivada, 2012, in press).

At present, we have converged on a new term within the CAT research space: *discrete bilectalism* (Rowe and Grohmann, 2013). This term implies two close but crucially discrete varieties operant in a diglossic society—here the local vernacular L (CG) and the superposed H (SMG). To the extent that the term 'bilectalism' is applied this way to the Cyprus situation, it suggests dual competence of the varieties native to two polities (Greece and Cyprus) and their respective native varieties (SMG and CG). It also describes individual competencies in the two varieties as a function of these individuals living and participating in this type of society.

Beyond mere terminology, I believe that it is very important that the learner's 'linguality' is properly characterized and correctly classified. This certainly pertains to all research activities that study language acquisition and development, and, in the case of Cyprus, it quite possibly also relates to the newly arising research area of second dialect acquisition (Siegel, 2010) as well as to multilingualism (Aronin and Singleton, 2012).

2.2. Direct Object Clitic Placement: CG vs. SMG

The grammars of CG and SMG differ in many interesting ways; some more, others less obviously. Indeed, the differences between the two reach far beyond the obvious — which are, however, the better understood, or at least the better studied characteristics: lexical, phonetic, and (morpho-) phonological properties of the language (e.g., Arvaniti, 2001; Theodorou, 2007; Okalidou et al., 2010). A comprehensive, formal description of CG syntax is yet to be compiled, though a very clear and well documented morpho-syntactic difference between the two varieties is clitic placement (since Terzi, 1999a, see among others Agouraki, 2001; Mavrogiorgos, 2009; Chatzikyriakidis, 2010; and diachronically Pappas, 2010).

Restricting attention to 3rd person direct object pronominal clitics, CG exhibits mixed clitic placement but is largely enclitic (postverbal), as opposed to SMG, which is proclitic (preverbal). As Terzi (1999b) first noticed, the syntactic environments triggering proclisis are similar to the differences in clitic placement observed for European Portuguese vs. Iberian Spanish. Characterizing CG as a Tobler–Mussafia-type language, which is the reason why clitics follow the verb instead of preceding it in a range of syntactic environments, she observed a similar behavior of clitic placement in European Portuguese (cf. Duarte and Matos, 2000). In many environments that allow postverbal enclisis in CG, SMG thus requires preverbal clitic placement, similar to Spanish and most other Romance varieties. However, there is a research gap for the morpho-syntactic description and analysis of CG adult grammar other than issues in the treatment of the clitic system first raised by Terzi (1999a, 1999b) and subsequently investigated by Agouraki (2001), Mavrogiorgos (2009), and Chatzikyriakidis (2010), to name but a few. This state of affairs has slightly changed by now, as can be witnessed by the growing number of studies on CG syntax (e.g., Agouraki 2006; Grohmann et al., 2006; Fotiou, 2009; Grohmann, 2009; Pavlou, 2010; Grohmann and Papadopoulou, 2011; Papadopoulou et al., this volume).

In Greek (i.e. CG as well as SMG), 3rd person clitics are derived from strong pronouns; pronominal clitics are marked for number, gender, and case. Concerning the particular characteristics of mixed clitic placement, as just mentioned, certain syntactic environments enforce preverbal, proclitic placement — otherwise postverbal enclisis is found in CG (but not in SMG). Illustrating with the basic paradigm in (1)–(2), clitics in CG can appear postverbally in both imperative and non-imperative contexts, whereas clitics can only be placed postverbally in SMG imperatives and gerunds (from Theodorou and Grohmann, to appear).

(1) *Non-imperative context:*

a. (O Jannis) θciavazi/diavazi to vivlio. *CG/SMG*
the John reads the book
'John is reading the book.'

b. (O Jannis) θciavazi **to**. *CG*
the John reads it-CL
'John is reading it.'

c. (O Jannis) **to** diavazi. *SMG*
the John it-CL reads
'John is reading it.'

(2) *Imperative context:*
Θcievase/Dievase **to**! *CG/SMG*
read it-CL
'Read it!'

On the other hand, clitics appear preverbally in CG when a complex element appears in the clausal left periphery, such as *wh*-expressions and relative operators; the same holds for the subjunctive marker *na*, negation particles, and the future particle *tha*, as illustrated in (3).

(3) a. *wh-question:*
Pou **to** θciavazi/diavazi (o Jannis)? *CG/SMG*
where it-CL reads (the John)?
'Where does John read it?

b. *relative clause*:
to gorua/koritzi pu **to** θciavazi/diavazi *CG/SMG*
the girl that it-CL reads
'the girl who is reading it'

c. *negative clause:*
En/Dhen **to** θciavazi/diavazi (o Jannis). *CG/SMG*
not it-CL reads (the John)
'Jannis doesn't read it.'

d. *subjunctive clause:*
Perimeno na **to** θciavasi/diavasi (o Jannis). *CG/SMG*
expect to it-CL read (the John)
'I expect [Jannis to read it].'

e. *future clause*:
Θa **to** θciavasi/diavasi (o Jannis). *CG/SMG*
will it-CL read (the John)
'John will read it'.

With relevance to the following, it can be noted that the canonical position of 3rd person pronominal object clitics in indicative declarative clauses in CG is postverbal, i.e. enclitic. What I will not do here (and what we have not done yet in the studies reported in this chapter) is to provide a theoretical analysis of the morphosyntactic operations involved in CG clitic placement (see the references cited above for existing suggestions).

2.3. Clitics in the Development of Child Grammars

In the course of the last twenty years or so, cross-linguistic investigations of the acquisition of object clitics have enjoyed a steady growth, which goes for typical language development just as much as for atypical or impaired language acquisition (see Varlokosta et al., to appear, for further discussion and references as well as Theodorou and Grohmann, to appear, where this overview is borrowed from). One tangible result from all this research is the observation that clitics often constitute a vulnerable domain for (a)typical language acquisition. Concerning the acquisition of clitics, there are two types of languages, one in which clitic acquisition is problematic and another in which it is not. The former includes Italian (Guasti, 1993/1994; Schaeffer, 1997), French (Haegeman, 1996; Hamann et al., 1996), Catalan (Wexler et al. 2004), and European Portuguese (Costa and Lobo, 2007); these languages share frequent omission of clitics in obligatory contexts, late appearance of clitic production in spontaneous language production data, and widespread use of full DPs in place of clitics. The latter type includes Spanish (Lyczkowski, 1999; Wexler et al. 2004), Romanian (Babyonyshev and Marin, 2005), and Greek — both SMG (Marinis, 2000; Tsakali and Wexler 2004) and CG (Petinou and Terzi, 2002; Grohmann et al., 2012); what these languages share is rare omission of clitics in obligatory contexts, early occurrence of clitics in spontaneous language production data, and low use of full DPs in place of clitics.

Regarding the emergence of clitics in child language, there are obvious cross-linguistic differences. Thus, French-speaking children were found to produce object clitics later than subject and reflexive clitics, between the ages of 2;6 and 3;0 (years;months), although they still omit clitics at age 3 (e.g., Hamann et al., 1996; Granfeldt and Schlyter 2004; Jakubowicz et al., 1997); the same holds for Italian-speaking children (Guasti, 1993/1994; Schaeffer, 1997). On the other hand, evidence for the earlier appearance of clitics in children's data has been found for (Standard Modern) Greek (Tsakali and Wexler, 2004), Spanish (Wexler et al., 2004), and Romanian (Babyonyshev and Marins, 2005).

Turning now to CG, Petinou and Terzi (2002) originally suggested that children achieved clitic placement by the age of 3. However, as Theodorou and Grohmann (to appear: 8) point out, "this age is not representative of clitic appearance as it refers to placement rather than emergence, an issue that is evident in languages with mixed clitic placement such as CG (Petinou and Terzi, 2002; Neokleous, 2013) and European Portuguese (Costa and Lobo, 2007)". As our own CAT research shows, for example, CG-speaking children easily produce clitics at 2;9 (see below), and, in a semi-structured elicitation task, even at 2;6 (Neokleous, 2013).

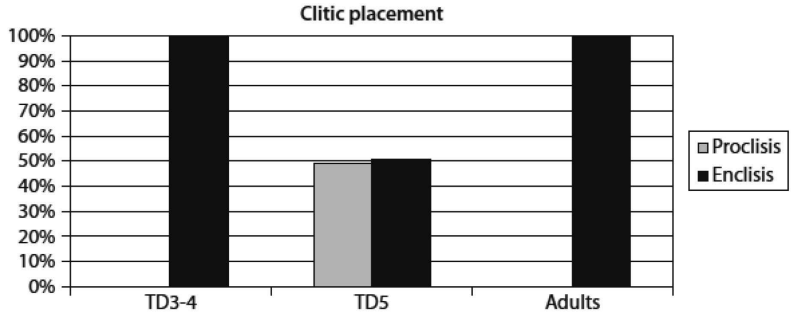
The original intention of our first pilot study (Grohmann, 2011) was this: In the context of COST Action A33 (2006–2010), a 3rd person direct object clitic production study was carried out with monolingual 5-year-old children across 16 different languages spoken in Europe, with around 20 participants per language (Varlokosta et al., to appear). The tool was a sentence completion elicitation task that aimed at the production of a verb–clitic sequence. To quote from that forthcoming article:

> This methodology allows us to compare the acquisition of pronominals in languages that lack object clitics ('pronoun languages') with languages that employ clitics in the relevant context ('clitic languages'), thus establishing a robust cross-linguistic baseline in the domain of clitic and pronoun production for five-year-olds. High rates of pronominal production are found in our results indicating that children have the relevant pragmatic knowledge required to select a pronominal in the discourse setting involved in the experiment as well as the relevant morphosyntactic knowledge involved in the production of pronominals. It is legitimate to conclude from our data that a child who at age 5 is not able to produce any or few pronominals is a child at risk for language impairment.
>
> (Varlokosta et al., to appear: abstract)

Within this context, we set out to test 24 — what we assumed to be monolingual — 5-year-old Greek Cypriot children, ranging from 60 to 72

months of age (13 girls and 11 boys with a mean age of 67 months and a standard deviation of 4; Grohmann, 2011). While we found no problems with the task itself, hence a high rate of production (95.8%, the second-highest of the 11 clitic languages tested; Varlokosta et al., to appear), what struck us as interesting was the fact that clitic placement vastly differed. The group of 24 children produced 49.64% pre- and 50.36% postverbal clitics — half and half. We then administered the same tool to 10 younger children (5 girls and 5 boys with a mean age of 3;11, ranging from 3;2 to 4;11) and 8 adults (4 female and 4 male participants with a mean age of around 37, ranging from 27 to 56 years). The results were surprising, as Figure 1-1 shows: Whereas the 5-year-olds placed 50% of their clitics pre- and 50% postverbally, all younger children and all adults produced 100% postverbal enclisis.

Figure 1-1: Clitic placement in the pilot study (Grohmann, 2011: 196)



Trying to investigate this odd state of affairs further, we extended our participants on all levels by widening the ages — first ranging from 2 to 6 (Grohmann et al., 2012), then going even older (Charalambous and Agathocleous, 2011, 2012; cf. Agathocleous et al., this volume) — and by controlling for a range of other factors, including age, gender, schooling grade, and geographical location. A slightly modified version of the tool was prepared for CG and SMG, both of which then administered to Greek Cypriot children, to Hellenic Greek children residing in Cyprus, and to so-called binational children, with one parent from Greece and the other from Cyprus; the same was done for adults (Leivada et al., 2010). In addition, we tested bilingual children (Karpava and Grohmann, this volume) and children with SLI (Theodorou, 2013; Theodorou and Grohmann, to appear). We also modified the task to a simpler, island-less 'short version' (Charalambous, 2012; Charalambous and Agathocleous, 2012; see Agathocleous et al., this volume) and administered the Production Probe

for Pronoun Clitics tool (created by Tuller et al., 2011; see Karpava and Grohmann, this volume), both subsequently further refined within COST Action IS0804 (2009–2013). All in all, we now have a sizeable amount of comparable data for the following groups of children who are not diagnosed with any speech–language–communication impairments:

A. 'bi-*x*'/bilectal Greek Cypriot children (2;8–8;11)
B. monolingual Hellenic Greek children (3;2–8;10)
C. binational Greek/Cypriot children (3;7–9;1)
D. bilingual Russian/Cypriot children (4;8–7;8)

These and other participants will be presented in more detail next.

3. Method

3.1. Participants

In the testing period from 2008 to 2011 (see acknowledgements note for a list of all student experimenters), a total of 763 individuals participated in the clitics tool(s). Most of these were Greek Cypriot children, but there are a number of other groups. Likewise, most testing was done on the Clitics-in-Islands tool (COST Action A33, 2006–2010), but other tasks were used, too (see section 3.2).

This total number of participants breaks down as follows: 727 children from public kindergarten, pre-school, and primary school, 20 teenagers from public middle and high school, and 40 adults from university and the general employment sector, with an eye on gender balance. Of the 727 children, all but 34 had typical language development to the best of our knowledge. 623 were 'monolingual' Greek Cypriot children (i.e. bilectal in CG and SMG), 40 Hellenic Greek children (native in SMG but exposed to CG due to residence in Cyprus), 30 binational children (native in SMG and CG, arguably with a preference for SMG from early on). In addition, 18 children were bilingual (Russian and Greek, i.e. CG and SMG), but not tested for language delay or impairment, and the remaining 16 bilectal children were diagnosed with SLI by experienced speech and language therapists (see below for more on this).

Table 1-1 lists the relevant participant details from all studies reported here.