

## **What Can the Acquisition of Proper Names and Kinship Terms Tell us about the Acquisition of the DP?**

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### **1. Introduction**

This paper is concerned with the acquisition of structures involving Proper Names (PN) and Kinship Terms (KT). Building on ideas from Radford (1990) and Pine & Martindale (1996), and based on data on the acquisition of structures involving PNs and KTs in Modern Greek (MG), I will argue that the acquisition of the functional projection DP does not take place in an all or nothing fashion, but rather develops in a gradual manner.

### **2. The Acquisition of the DP**

#### **2.1. Acquisition vs. Mastery**

According to Radford (1990), children's early grammar lacks functional categories. Based on a) the absence of determiners, b) the lack of the possessive suffix *-s*, c) the use of caseless nominal phrases and the avoidance of pronouns inflected for case, d) the lack of the semantic functions of the determiner system and e) binding violation facts, Radford suggests that the D-system is altogether missing from English child grammar.

Moreover, Radford argues for the distinction between *acquisition* and *mastery* of inflectional morphemes. Specifically, he proposes that a sufficient condition for the *acquisition* of an inflectional morpheme is the productive use only with the appropriate category of stems (e.g. the English plural morpheme *-s* attached only to noun stems), however, the condition for *mastery* of a morpheme, is productive use in such a way that it attaches at least 90 % of time to an appropriate class of stems in an appropriate context.

#### **2.2. Acquisition of D as a gradual process**

As criterion for the acquisition of the syntactic category D, Pine & Martindale (1996) propose the extent in which children show overlap in the contexts in which they use different determiner types. This is based on the idea that children should have knowledge of the relationship between different determiner types, if they have acquired the syntactic category D. Hence, there should be a large amount of overlap in the contexts in which different

determiners occur relative to the amount of overlap in the speech of adults.

Pine & Martindale counted the degree of noun and predicate overlap in child speech and compared it with the degree of overlap in the speech of the children's mothers. By showing that there is a significant difference in the degree of overlap in the use of determiners by children compared to adults, although distributional errors of determiners were completely absent for 3 out of seven children and in the remaining 4, errors were very rare, they claimed that a limited scope formula account fits the data better than a syntactic account.

Thus, Pine & Martindale suggested that '*the acquisition of a general syntactic determiner category may be a gradual process involving the progressive broadening of the range of predicate contexts in which different determiners appear*' (Pine & Martindale 1996:392).

### 2.3 Acquisition of properties vs. mastery

The term *acquisition of x* has been applied very often for the use of a morpheme over 90 % in obligatory contexts (cf. Brown 1973). Therefore, it is misleading to use it for the indication that: a) a morpheme is productively used and b) children do not make distributional errors, as in Radford (1990). Therefore, we will replace the term *acquisition of x* through the term *acquisition of a property of x*. Consequently, Radford's distinction will be reformulated through the terms *acquisition of properties vs. mastery*.

Building on the idea of Pine & Martindale, that the acquisition of the category D is a gradual process, and making use of the distinction between *acquisition of properties vs. mastery*, I will show that not all of the properties which are associated with D (e.g. marking of case, number, gender, semantic properties, binding properties, etc.) are acquired simultaneously<sup>1</sup>. Making use of data from the acquisition of PNs and KTs in MG, I will show that the property of determiners to select CPs (Determiner Complementation), gets acquired later than the property of determiners to select single nouns as complements.

### 3. Theoretical considerations

When PNs and KTs are used in argument positions in MG, they must appear obligatorily with the definite article, as illustrated in (1). Apart from their use in simple Det+N constructions, PNs and KTs may also be used in combination, preceded by one definite article or with multiple determiners, as in (2).

- (1) I   mama   idhe    to   Niko.  
     the mom   saw    the   Nikos  
     'Mom saw Nikos.'
- (2) I   ghiaghia   (i)   Eleni.  
     the grandma   the   Eleni  
     'Grandma Eleni.'

There is no controversy with respect to the syntactic representation of PNs and KTs in structures, such as (1), which can be represented as simple DPs (for the DP hypothesis in MG, see among others, Horrocks & Stavrou 1987, Karanassios 1990, Stavrou 1996).

Structures like (2) have been traditionally described as instances of apposition. However, more recently Stavrou (1994, 1995) has convincingly shown, that they can be better described as instances of one complex DP. Examples with multiple determiners are analyzed in Stavrou (1995) as DefP adjuncts.<sup>2</sup>

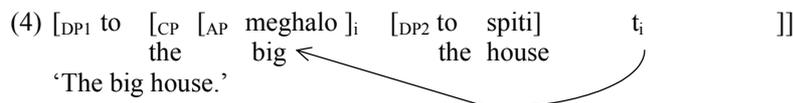
In this paper, building on the idea of Stavrou, that (2) is not an instance of apposition, but departing from the adjunction analysis of Stavrou, I will analyze (2) as an instance of Determiner Complementation (see Section 3.1.). Moreover, a sub-case of (2) will be treated as a compound (see Section 3.2.).

### 3.1. Determiner Complementation

KTs and PNs with multiple determiners, as in (2), are reminiscent of the phenomenon of Determiner Spreading (DS) (see Androutsopoulou 1995), illustrated in (3); in both cases, there is an optional definite article present.

- (3) To meghalo (to) spiti.  
 the big the house  
 'The big house.'

For the structure of DS, I adopt Alexiadou & Wilder's (1997) analysis, which is based on Kayne's (1994) analysis of reduced Relative Clauses (RCs). In Alexiadou & Wilder, adjectives are base-generated as predicates of a CP, which is the complement of D. Movement of the adjective to SpecCP triggered by an A-feature of C results to the sequence D-Adj-N, as shown in (4).

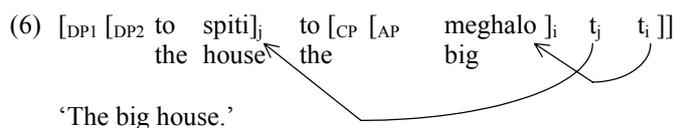


However, the properties of KTs and PNs with multiple determiners are not identical with the properties of DS, as we can see in Table 1.

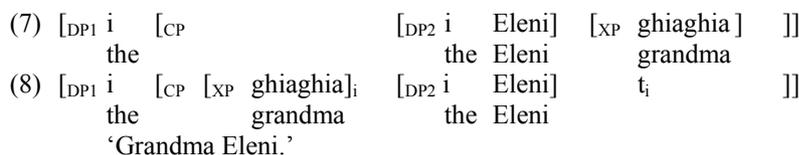
Table 1: Properties of KTs and PNs with multiple determiners vs. DS

<i>KTs and PNs with multiple det.</i>	<i>Determiner Spreading</i>
a) multiple determiners	multiple determiners
b) only with definite DPs	only with definite DPs
c) Noun-Noun	Adjective-(Adjective)-Noun
d) rigid order	different word-order possibilities

The two structures share only properties a) and b); with respect to c), KT's and PN's with multiple determiners consist of two nouns, while DS applies to Adj-N sequences. With respect to d), more than one serialization is possible in DS, as the result of raising of DP2 to SpecDP1, as illustrated in (6). In KT's and PN's with multiple determiners on the other hand, the order is rigid, unless we have contrastive stress, in which case we are dealing with movement to SpecDP and in that case the derivation is identical to DS. However, as KT's are relational nouns, they denote properties and are, thus, similar to adjectives.

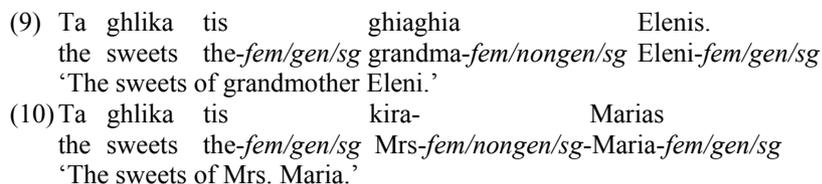


Due to the KT's and PN's with multiple determiners can be treated similarly, cf. (7), (8).



### 3.2 Compounds

There exists a variant of (2), in which only the final noun has case marking and agrees with the determiner, as in (9).<sup>3</sup> The possibility for the first noun to remain uninflected is parallel to the type of nominal compound shown in (10).



The existence of phrasal compounds in MG has been already brought into attention by Anastasiadi-Simeonidi (1986), Ralli (1992) and Ralli & Stavrou (1998). For the identification of phrasal compounds, Ralli (1992:169) defined the following criteria: a) functional categories are excluded from their internal representations, b) normally, there are no NPs following the head, c) no syntactic operation can affect the internal structure by moving, inserting or replacing a constituent, and d) non-referentiality of the non-head.

Indeed, Ralli's criteria are satisfied in structures such as (9): a) determiners are disallowed between the KT and the PN, as shown in (11), b) arguments of

the first noun may not intervene between the two nouns,<sup>4</sup> as in (12), c) movement of the second noun inside or outside the phrase is prohibited, as in (13) and (14), and d) PNs used without the definite article are not referential (cf. Marinis, to appear). Thus, I assume that the KT+PN combinations in (9) have the status of lexicalized/frozen elements and they can be better described as compounds.

- (11)\*Ta ghlika tis ghiaghia tis Elenis. (Criterion a)  
 the sweets the grandma the Eleni  
 ‘The sweets of grandmother Eleni.’
- (12)\*I ghiaghia tu Niku Eleni meni stin Ko. (Criterion b)  
 the grandma the Nikos Eleni lives in-the Kos  
 ‘Nikos’ grandma, Eleni, lives in Kos.’
- (13)\*I Eleni ghiaghia meni stin Ko. (Criterion c)  
 the Eleni grandma lives in-the Kos  
 ‘Grandma Eleni lives in Kos.’
- (14)\*Eleni i ghiaghia meni stin Ko. (Criterion c)  
 Eleni the grandma lives in-the Kos  
 ‘Grandma Eleni lives in Kos.’

#### 4. Predictions

1. If early child production is characterized by limited scope formulae, PNs and KTs should initially be used in a lexically-based fashion,
2. If more complex structures are acquired later than less complex ones, PNs and KTs in Det+N and compounds should be used before PNs and KTs with multiple determiners, which demand two DPs, a CP and movement,
3. PNs and KTs with multiple determiners should be used simultaneously with DS, since both have the same underlying structure (see 3.1.).

#### 5. Data

##### 5.1. Methodology

This study is based on a longitudinal corpus, the Christofidou Corpus, from one monolingual Greek child, covering the age of 1;7-2;8. These data have been compared to data from the Stephany Corpus, a cross-sectional corpus consisting of the recordings of 4 monolingual Greek children, between the age of 1;9-2;9 which is available in the CHILDES Database (MacWhinney & Snow 1985). Details about the two corpora are summarized in Table 2.

Table 2: Christofidou Corpus, Stephany Corpus

Child	Christofidou		Stephany		
	Christos	Spiros	Janna	Meri	Maria
Age	1;7-2;8	1;9	1;11-2;9	1;9-2;9	2;3-2;9
Nr. of recordings	69	2	9	12	5
Nr. of utterances	12,383	443	1,357	4,154	3,074

## 5.2. Results

There is individual variation in the use of PNs and KT's. Due to the fact that only one child, Christos, uses all structures, the developmental stages have been based on the first use of structures involving PNs and KT's in his speech; the data from the other children have been matched to his data. The six stages are illustrated in Table 3.

Table 3: The development of constructions with KT's and PNs

KT's and PNs	Christos	Spiros	Janna	Maria	Mairi
1 bare Ns, Det-N	1;8.11-1;10.9	1;9	1;11-2;9	2;3	1;9-2;3.17
2 KT+PN, PN+KT	from 1;10.24				
3 def.art.-KT+PN, def. art.-PN+KT	from 2;0.16				from 2;3.18
4 KT-def.art.-PN	from 2;1.14				
5 def.art.-KT-def.art.-PN, Determiner Spreading	from 2;2.14			2;9	2;9.15
6 no def.art. omission in def.art.-KT-def.art.-PN	from 2;7.26				

### Stage 1

Children use KT's and PNs alone or in Det-N constructions. There are no structures involving multiple determiners or compounds attested.

### Stage 2

Christos starts using PNs in compounds of the type *PN+X*: *P(l)uto Pav* (1;10.24) = *Pluto woof*, and *Donald papaci* (1;11.0) = *Donald duck-diminutive*<sup>5</sup>. Since these are the only compounds used, there is no evidence for productive compound formation, i.e. these two compounds should be lexically based.

At the age of 1;11.13, Christos uses for the first time PNs combined with KT's to refer to his grandparents. At 2;0.7, he uses KT+PN compounds for the first time when he refers to his parents, e.g. *mama Souli* = *mom Souli*. Evidence for the compound status of these constructions comes from their inflection: Christos inflects only the last noun, as shown in (15). Moreover, it is not the case that he never inflects the PN. When he uses the PN without the KT, it is inflected, as shown in (16).

- (15)CHR: Iko papus. [adult = o papus (o) Nikos] (1;11.13)  
 Nikos grandpa [the grandpa (the) Nikos]  
 'Grandpa Nikos.'
- (16)CHR: Kakani Nikos. [adult = tha/na kani to Niko](1;11.13)  
 paint Niko [fut/subj-prt<sup>6</sup> do the Nikos]  
 'I want to paint Niko.'

The word order of the PN and KT is not uniform: for his mother, he uses the order KT+PN, but for his grandfather, grandmother and father PN+KT, which parallels reversed compounds in English (cf. Mueller Gathercole 1999).<sup>7</sup>

### Stage 3

Christos uses for the first time definite articles with compounds in 2;0.16, as illustrated in (17). Mairi uses PNs and KTs in compounds to refer to one of her grandmothers, *ghiaghia Kostula* = *grandma Kostoula*, and the investigator, *thia Ulla* = *aunt Ulla*, as illustrated in example (18).

- (17)CHR: O Pitsi tu Niko papu. [adult = o Christos tu papu Niku] (2;0.16)  
 the Christos the Niko grandpa [the Ch. the grandpa Nikos]  
 'Grandpa Niko's Christos.'
- (18)MAIR: Dhen echi i thia Ulla. (2;3.18)  
 not has the aunt Ulla  
 'Aunt Ulla does not have (it).'

Evidence for the compound status of the construction is provided again from noun inflection. In (17), both nouns should be inflected with the MASC/GEN/SG suffix. Christos, however, adds the suffix *-u* only to the last noun which is the only one that agrees with the preceded definite article.

### Stage 4

Christos uses KTs and PNs in the sequence *KT-definite article-PN*, as illustrated in (19), which is similar with the structure involving multiple determiners, but the definite article preceding the KT is missing.

- (19)CHR: Mama to Chiuli papali ti ciana. (2;1.14)  
 I mama i Souli tha pari tin tsanda. [adult]  
 the mom the Souli fut-prt take the bag  
 'Mom-Souli is going to take the bag.'

### Stage 5

Christos uses multiple determiners at 2;2.14 for the first time, as in (20). Moreover, at 2;3.21, the first instance of DS shows up with both word-orders, i.e. those in (3) and (8) above. Maria and Mairi do not use multiple determiners with KTs and PNs. However, they use DS. Maria uses DS involving one movement; Mairi uses DS involving both one and two movements, as in (21) and (22) respectively.

- (20)CHR: ...na maghietsi i mama i Suli. (2;2.14)  
 subj-prt cook the mom the Souli  
 ‘... mom-Souli should cook.’
- (21)MAIR: O mik(r)oso likos pu ine? (2;9.15)  
 the small the wolf where is  
 ‘Where is the small wolf?’
- (22)MAIR: O likos o mik(r)ospu ine? (2;9.15)  
 the wolf the small where is  
 ‘Where is the small wolf?’

### Stage 6

Between 2;7.26 and 2;8.25, there are no instances of definite articles missing in structures involving multiple determiners, which start to be used more frequently.

## 6. Discussion

All three predictions are borne out by the data: 1) children initially produce compounds consisting of KT and PN in a lexically based fashion, 2) more complex structures are acquired later than less complex ones: PNs and KTs in single DPs and in compounds emerge before PNs and KTs with multiple determiners, and 3) DS emerges slightly after the first use of PNs and KTs with multiple determiners.

*What kind of evidence can the data on the acquisition of PNs and KTs provide with respect to the acquisition of the DP?*

As we saw, constructions involving PNs and KTs are acquired gradually. Children initially use PNs and KTs as bare nouns or with definite articles (Stage 1). Then they start using compounds consisting of PNs and KTs without definite articles (Stage 2), and only later with definite articles (Stage 3). Constructions involving multiple determiners are used even later; their acquisition has several stages: children use first an incomplete structure, omitting the definite article which heads the first DP (Stage 4), while they use the definite article between the KT and the PN. Only later (Stage 5) do they produce the complete construction. DS appears slightly after the first use of PNs and KTs with multiple determiners and subsequently (Stage 6) structures involving multiple determiners are used more frequently and without definite article omission.

These data provide evidence for a developmental approach, according to which syntactic structures are acquired in a gradual manner. Thus, we can assume that the DP is operative as soon as we see that children have the knowledge of some properties of the DP. However, only when children have acquired the whole cluster of the DP properties we can talk about *mastery* of the DP (for more details, see Marinis, in preparation).

## Notes

\* I am grateful to Anastasia Christofidou for giving me the Corpus of her son Christos, to Susan Powers, Thomas Roeper, Virginia Mueller Gathercole and the audience of CLS 99 for helpful comments. This paper is part of my Dissertation research in the Graduate Program of the Humboldt University at Berlin and the University of Potsdam, supported by the DFG.

1. This idea is compatible with Christofidou (to appear), who has shown that case is acquired earlier than number for Class II nouns.
2. According to Karanassios (1990) and Stavrou (1995, 1996), DefP is an agreement projection between DP and NP, parallel to AgrO in the clausal domain, whose lexical instantiations are definite articles. D hosts personal and demonstrative pronouns, as well as indefinite articles, Def hosts definite articles and the plural suffix.
3. Examples like (9) are often used for well-known or familiar persons, e.g. (i).  
(i) Ta paramithia tis thia Lenas.  
the fairy-tales the aunt Lena  
'The fairy-tales of aunt Lena.'
4. (12) is grammatical with a pause between *tu Niku* and *Petros*. However, the pause indicates that we are dealing with an apposition (cf. Stavrou 1995).
5. It should be noted that *Donald* is the current name and not *Donald papaci*.
6. na = subjunctive particle, tha = future particle
7. Powers (1998) finds examples of the type *my comb hair, my brush teeth*, in child English, which she analyzes as reduced purpose clauses.

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