

THE EARLY DEVELOPMENT OF CASE FORMS IN THE  
SPEECH OF A GREEK BOY:  
A PRELIMINARY INVESTIGATION

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1. Introduction

This study is part of an international project in which the early stages of morphological development (pre- and protomorphology) of more than twenty languages are being investigated (see Dressler and Karpf 1995). The preliminary analysis of the development of case distinctions presented in this paper is based on the spontaneous and semi-spontaneous, guided speech of a monolingual Greek boy at the end of the second and the beginning of the third year collected by the first author. It will be shown how the opposition of marked case forms gradually emerges from earlier premorphological nominal forms unmarked for case in the child's language. Before tracing this development, we will sketch the nominal case system of the adult language.

2. Greek Noun Inflection

The grammatical categories of the Standard Modern Greek (SMG) noun are gender, case, and number. There are two numbers, three genders, and four cases. However, four different case forms are only realized in the singular of nouns ending in *-os* and referring to animates (example 1). With other nouns, case distinctions rely on the form of the noun in combination with the determiner.

(1) Nouns ending in *-os*

NOM	ánthrop-os	'human being, man'
GEN	anthróp-u	
ACC	ánthrop-o	
VOC	ánthrop-e	

Since the vocative is formally marked only in non-neuter animate nouns and plays a minor functional role, Greek nouns are usually divided into the two major classes of *diptota* and *triptota* depending on whether they distinguish between two or three case forms in the singular excluding the vocative (Kourmoulis 1964-5, Babiniotis and Kontos 1967; also see Mackridge 1985, Stephany 1997).

The *diptota* class (Major Class I) is by far the largest of the two major declensional types of SMG nouns comprising all neuters as well as masculine and feminine nouns not ending in *-os*. In the singular, case distinctions pattern differently in the three genders (examples 2). While masculines mark the nominative by *-s* and use the unmarked form ending in a thematic vowel for both the genitive and accusative, feminines and neuters distinguish a marked genitive form (by adding *-s* or *-u* to feminine and neuter stems, respectively) from the unmarked nominative/accusative.

(2) Major Class I

	MASC		FEM		NEUT
N	ándra-s	N/A	jinéka	N/A	pedhí
G/A	ándra	G	jinéka-s	G	pedhi-ú
	'man'		'woman'		'child'

*Triptota* nouns (Major Class II) end in *-os* and are mostly masculine.<sup>1</sup> While they follow the masculine declensional pattern for the distinction of nominative and accusative (*-s* vs. vowel ending), there is a third form for the genitive ending in *-u* (see examples 1). A third noun class consists of some very special and rare declensional types. Since SMG is a typical Indo-European language of the inflecting-fusional type it also has many subclasses and exceptions, especially among neuter nouns. These are, however, irrelevant for the stage of morphological development we are concerned with. Furthermore, the boy studied here does not yet use case forms differing in number of syllables (e.g., *kréas* 'meat:NEUT:NOM:SG', *kréa-t-os* 'meat-EPENTH-GEN:SG') and case distinctions are still limited to singular noun forms.

Token frequencies of nouns belonging to the three declensional classes differ widely in the spoken as well as the written language: 81% of all noun tokens are class I nouns, 16% belong to class II, and 3% to class III (Kavoukopoulos 1996:10).<sup>2</sup> While most class II nouns are masculine (the rest being feminine), the feminine gender slightly predominates in class I (Table 1).

Table 1. Token frequency of declensional types (Kavoukopoulos 1996: 10)

CLASS I	CLASS II	CLASS III
FEM 42%	MASC/(FEM) 16%	MASC/FEM/NEUT 3%
NEUT 31%		
MASC 8%		

Studying the speech of Christos' mother when addressing her son results in roughly the same relative distribution of class I as opposed to class II and III nouns (Table 2). The larger percentage of class I neuter nouns is due to extensive use of the diminutive *-aki* attributing neuter gender.

Table 2. Token frequency of declensional types in Mother's child-directed speech

CLASS I	CLASS II	CLASS III
FEM 28%	MASC 12%*	NEUT 2.5%
NEUT 50%		
MASC 5%		

\* 3% of these consist in *Christos*, the boy's name.

### 3. Development of Christos' System of Nominal Case Forms

The study of Christos' case forms is based on roughly two hours of tape recordings made between 1;11.0 and 2;0.4 and 90 minutes each recorded between 2;2.12 – 2;3.1 and 2;4.1 – 2;4.12 referred to below as periods A, B, and C, respectively. The data was analyzed with the help of CHILDES (MacWhinney 1995).

It is at 1;11 that nominal case forms begin to be distinguished in Christos' speech. As found by Stephany (1997) for other Greek monolingual children, before this stage his noun forms "lack overt casemarking and correspond to standard accusative singular (or plural) ending in a vowel." The indistinctness of marked singular noun forms ending in *-s* (MASC:NOM:SG and FEM:GEN:SG) and unmarked forms ending in a vowel (MASC:ACC:SG and FEM:NOM/ACC:SG) may in part be attributed to phonological reasons: Until 1;11, Christos only uses open final syllables, rendering /mersedés/ 'Mercedes' as [dedé] or the onomatopoeic /tsaftúf/ as [tsatsú].

In order to come to grips with the process of development of case distinctions on a lexeme-by-lexeme basis the forms of masculine singular nouns used by Christos between 1;11.0 and 2;4.7 are listed in Table 3.<sup>3</sup>

<sup>3</sup> There are unfortunately no data from 1;11.1 through 1;11.09 due to technical reasons.

<sup>1</sup> Feminine nouns ending in *-os* are only productive in SMG when referring to professions, e.g. *i jatrós* 'the:FEM doctor'.

<sup>2</sup> Since we are not concerned here with the development of plural case distinctions, we have included nouns with an imparisyllabic plural formation, such as *mamá* – *mamádhés* 'Mommy', *babá* – *babádhés* 'Daddy', which Kavoukopoulos assigns to class III, into class I.

Table 3. Tracing the development of the case distinctions of masculine nouns in Christos' speech between 1;11.0 and 2;4.12<sup>4</sup>

Lexemes	NOM		ACC		GEN	VOC	CASE
	-Vs	-V*	-V	-Vs*	-V	-V	unmarked

## Period A (1;11.0 – 2;0.4)

## 1;11.0

Lexemes	NOM	ACC	GEN	VOC	CASE
Christos	1	1			1
Donald					6(N)
Goofy					8(N)
Jórghos					1(N)
Mickey					17(N)
papús	1	1			

## 1;11.10

Lexemes	NOM	ACC	GEN	VOC	CASE
Christos	1				
papús	1				
pinguínos	8	1			
Plúto	3				
Plúto vav					3(N)
Spot	2				

## 1;11.13

Lexemes	NOM	ACC	GEN	VOC	CASE
Christos	2		1		1
Donald					1(N)
Goofy					1(N)
Mickey	1				2(N)
Níkos			1		
Níko papús	2				
(for <i>Níkos papús</i> )					
papús	2		1		3
					2(G)

Lexemes	NOM		ACC		GEN	VOC	CASE
	-Vs	-V*	-V	-Vs*	-V	-V	unmarked

## 1;11.19

Lexemes	NOM	ACC	GEN	VOC	CASE
babás	2				
Donald					3
Jórghos			1		
/maks/					1
Mickey	5				3(N)
Níko papú					1
papús	1			1	
pinguínos	3	1			
Plúto vav					2(N)

## 1;11.27

Lexemes	NOM	ACC	GEN	VOC	CASE
Christos	19	1			
Goofy					1
/maks/					1(N)
Mickey					2
pinguínos	1				
pots babá	1				
(for <i>Spot babás</i> )					

## 2;0.4

Lexemes	NOM	ACC	GEN	VOC	CASE
babás	1				
Christos	1				
Dhimítris	1				
Donald					1(N)
Goofy		2			
Mickey	8	2			
papús	5			1	1
pinguínos	4				

<sup>4</sup> Functionally ambiguous unmarked case forms are subsumed under CASE; best guesses are added in parentheses (N = NOM, G = GEN).

Lexemes	NOM		ACC		GEN	VOC	CASE
	-Vs	-V*	-V	-Vs*	-V	-V	
							unmarked

**2;0.4 (cont.)**

Plúto vav							3(N)
spot	1						2
Spot babás	1						
Vasílis		1					

**Period B (2;2.12 – 2;3.1)****2;2.12**

babás	2					3	
Christos	1						

**2;2.14**

babás	5						
Christos	16	1					1
jeranós	1						
mílos		1	2	2			
Níkos					1 <sup>5</sup>		1
papús			1		1		

**2;2.18**

babás	2						
Christos	8						
papús					1		
papú Pítsos	1						
(for <i>papús Christos</i> )							

<sup>5</sup> Form ending in -o instead of SMG -u.<sup>6</sup> See note 5.

Lexemes	NOM		ACC		GEN	VOC	CASE
	-Vs	-V*	-V	-Vs*	-V	-V	
							unmarked

**2;2.24**

babákas	1						
babás	2						
Christos	4				1 <sup>6</sup>		
Dhimítris	7	1					
Donald	1						
ipopótamos	2		1				1
líkos	3						
odhighós	5						
papús	9		1				
skílos	2		2				

**2;3.1**

Christos	2		2				
Dhimítris					1		

**Period C (2;4.1 – 2;4.12)****2;4.1**

aetós	4						
babás			1				
Christos	1						
papús	12	1	6		7		1

**2;4.9**

aetós	4						
Christos	7		1		2(-u)		
jeranós	4						
papús					2		

<sup>7</sup> Christos' idiosyncratic creation meaning something like 'itinerant greengrocer'.



Lexemes	NOM		ACC		GEN	VOC	CASE
	-Vs	-V*	-V	-Vs*	-V	-V	
							unmarked

## 2;4.12

babás						3	
Christos	5				5(-u)		
Donald					1		
Goofy	1	1			2		
kafés			5				
korakós <sup>7</sup>	2	1					
Mickey	1				1		
papús	10				4	1	
Periklís	4	3			1		
thrílos	2						

The development of nominal case distinctions in Christos' speech seems to support the division of the entire period of observation between 1;11.0 and 2;4.12 into three phases. Period A (1;11.0 – 2;0.4) is characterized by the emergence of the nominative marker *-s* with most native masculine nouns. Within the first ten days after the first appearance of a masculine noun carrying the (adult) nominative marker *-s* (*papús* 'grandfather'), the marker occurs with a number of different nouns and is soon overgeneralized to foreign names. Counting such overgeneralizations as correct and leaving unmarked forms of ambiguous function aside (CASE column), 88.5% of Christos' nominative forms of masculine nouns carry the nominative marker and only 2% of forms marked by *-s* are misused with an oblique function (N = 97). In order not to overestimate Christos' knowledge of the category of case at this point, it must be noted that more than half of masculine noun forms still end in a vowel. Since most of the masculine nouns he uses have animate referents, the opposition of nominative and accusative forms of one and the same lexeme is rare (*papús/papú* at 1;11.13), although there are a few instances of unmarked vocatives and one genitive form.

How concrete (lexically bound) or abstract does Christos' knowledge of nominal distinctions seem to be by the end of the first month after the emergence of the first masculine noun marked for nominative singular? Several pieces of evidence point to the fact that the child has understood that there are two categories of (animate) nouns, namely those which may take the marker *-s* when being used for pointing to or identifying persons or other animate beings and those which may not. Since Christos never overgeneralizes the marker *-s* to feminine nouns in such functions (N = 120), which constitute the majority of contexts in which he uses

the marked case form of masculine nouns, he does indeed seem to have arrived at a kind of gender distinction. Furthermore, he uses the nominative marker with at least eight different lexemes, rarely overusing it, and extensively overextends it to foreign words such as *Spot* and *Mickey*.<sup>8</sup> A further kind of systematicity is his reduction of double case marking of appositional constructions to a single marking (*Niko papús* for *Nikos papús* 'Grandfather Nikos', *Spots babá* for, overgeneralized, *Spots babás*). There is no evidence for formulaic nominative/accusative expressions.

The marked genitive singular as opposed to the unmarked nominative/accusative/vocative of feminine nouns also emerges during period A, but remains limited to one lexeme, (*mamá-s* 'Mummy-GEN', 5 tokens). Although this genitive form marked by *-s* only amounts to 4% of feminine singular noun tokens (N = 120), unmarked forms of feminine nouns do not seem to be overgeneralized to cover the genitive but function correctly as nominative or accusative. This impression may at least partially be due to the low overall frequency of genitive noun forms as well as the undecidability of the function served by a given unmarked noun form, especially in verbless utterances (MLU 1.5 (words)). The only masculine noun occurring with a genitive function is the unmarked form *Jórgho* (instead of *Jórgh-u* 'George-GEN').

Two months after period A, in the third month of his third year, Christos' use of the marked nominative singular of masculine nouns has developed considerably. The form now occurs with further lexemes, the type/token ratio has risen from 10.25 in period A to 16.67 in period B, and the error rate of using unmarked forms with a nominative function has dropped from 11.5% in period A to 5% in period B (N = 78). Although there are still a few instances of overuse of *-s* in the accusative, the nominative is opposed to the accusative with four lexemes (*-Vs* vs. *-V*). Since Christos now uses definite articles and his MLU has reached 1.9, the case of noun phrases is nearly always decidable.

The genitive of masculine nouns used to express possession – mainly when answering questions about ownership such as *pjanú ine?* 'whose is it?' – has become a little more frequent during period B, but class II nouns continue to be used in their unmarked form without the standard vowel change to *-u* (/xrist-o/ instead of /xrist-u/ 'Christos-GEN') (examples 3).

- (3) Christos, 2;0 to 2;3
- (a) [pítso] for /tu xrist-u/  
'the:MASC:GEN Christos-GEN'
- (b) [papú] 'Grandfather's'
- (c) [to bebé to níko] for  
/to beemvé tu ník-u/  
the:NEUT:NOM BMW the:MASC:GEN Nikos-GEN  
'Nikos' BMW' [German car make]

<sup>8</sup> While Mother always uses the unmarked forms of foreign words such as Mickey, Goofy, and Spot, Grandfather sometimes marks the first two lexemes but never the third one for nominative thus varying between /mikis/, /gúfis/ and /miki/, /gúfi/.



Forms like *pítso* expressing possession may be interpreted as belonging to an immature and less differentiated case system than that of the adult language on two accounts. When considering their intended meaning, such forms support a familiar psychological principle of cognitive development stated by Werner and Kaplan (1963: 60) and quoted by Slobin (1973: 185):

Wherever functional shifts occur during development, the novel function is first executed through old, available forms; sooner or later, of course, there is a pressure towards the development of new forms which are of a more function-specific character, i.e., that will serve the new function better than the older forms.

When relating *pítso* to the other masculine singular forms expressing possession this form may be interpreted as an overgeneralization of the inflectional pattern of masculine nouns belonging to class I which use the unmarked form ending in the thematic vowel for the genitive as well as the accusative singular (e.g. *babá-s* 'Daddy:MASC-NOM:SG' vs. *babá* 'Daddy:ACC/GEN'). In this view, Christos at first inflects all masculine nouns according to the dominant class I pattern of the adult language so that there is a single inflectional paradigm for masculine nouns (4) as opposed to that of feminine nouns (*mamá-s* 'Mummy-GEN' since 2;1.22, *jajá-s* 'Granny-GEN' at 2;3.23). Thus, for the child inflectional patterns are at first totally determined by gender, something which is only partly valid for the adult language.

(4)	SMG		Christos, 2;0 – 2;3
	CLASS I	CLASS II	CLASS I
NOM	babás	xrístos	babás pít(s)os
ACC	babá	xrísto	babá pít(s)o
GEN	babá	xrístu	babá pít(s)o

The interpretation of forms like *pítso* as integrated into the paradigm of class I masculine singular case forms seems to be supported by the fact that at the time when Christos starts using the unmarked form *pítso* for expressing possession, the contrast between the marked nominative singular and the unmarked accusative singular form of masculine nouns is already well established. At this very point of development, he has also started to distinguish the marked genitive from the unmarked nominative/accusative forms of feminine nouns. It thus seems that at period B Christos has established a kind of one-class declensional system based on the opposition -V/-Vs to partially express gender and case distinctions.

The reason why the boy has not yet developed two contrasting forms of neuter nouns seems to be a pragmatic one: The referents of neuter nouns are most often inanimate and therefore cannot express a possessor. Furthermore, the extremely frequent diminutive suffix *-aki* attributing neuter gender to nouns of all three genders does not allow a genitive form.

A month after period B, the genitive of masculine nouns has not only become much more frequent, but the class II lexeme *Christos* is now correctly marked by *-u* ([pít(s)-u] for /xríst-u/ 'Christos-GEN'). This is the beginning distinction of two declensional patterns of masculine nouns (with and without vowel change in the genitive singular). It must be noted, however, that use of the genitive expression *tu Christu* 'of the Christos' to express possession is very frequent in the input and is preferred to the pronominal expression *dhikó su* 'own your:GEN'. One reason why no other masculine nouns ending in *-os* occur in the genitive is that, with the exception of Christos' creation /korakós/ 'itinerant greengrocer', they are all inanimate. It may well be that Christos begins to distinguish between two declensional patterns of masculine nouns so early because his own name belongs to class II and is frequently used in the input. During period C, use of the genitive marking of feminine nouns also develops: it now occurs with four different lexemes (7 tokens).

#### 4. Conclusions

Summarizing the development of case forms of masculine and feminine nouns from the end of the second well into the first half of the third year in Christos' speech, the following development seems to emerge. Nominal inflection first sets in at 1;11 when masculine nouns begin to be marked for nominative singular. This results in a gender distinction between animate masculine (marked) and feminine nouns (unmarked). Because of the many verbless one-word utterances with no decidable case function and the rare opposition of nominative and oblique case forms of one and the same lexeme, it is not quite clear whether, during period A (1;11 – 2;0), Christos has as yet achieved a true case distinction. Mostly correct use of both marked and unmarked forms of masculine and feminine nouns in relevant contexts two months later (MLU 1.9) suggests that Christos has developed partial knowledge not only of gender but also of case distinctions by period B (2;2.12 – 2;3). He seems to have established a kind of one-class declensional system based on gender and corresponding to the most frequent adult class I nouns. In period C (2;4.1 – 2;4.12), a further achievement is the beginning differentiation of the inflectional pattern of masculine nouns into class I and class II. The fact that the genitive form ending in *-u* remains limited to the boy's own name (/pítso/ for /xríst-u/ 'Christos:GEN') during this period is evidence for lexically restricted rather than general inflectional knowledge.

Differences in the amount and kind of data collected do not allow a straightforward comparison of Christos' development of nominal case inflection with that of other monolingual Greek children. While Christos has been found to mark the nominative singular of masculine nouns in 88.5% of tokens already by 1;11, three subjects of an experimental study by Theophanopoulou-Kontou (see Stephany 1997) only mark this case consistently by 2;3. The linguistically most advanced of three children whose spontaneous speech was studied by Stephany (1997) at 1;10 only marked the nominative singular of masculine nouns in 50% of the respective tokens (N = 76). On the other hand, a boy named Spiros marked his name for nominative

singular in 85% of tokens (N = 34). This difference between the girl's and the boy's development may be attributed to the more frequent occurrence of masculine nominative singular forms in the boy's input as opposed to the girl's.

As with Christos, percentages of nouns marked for the genitive singular are in the beginning much lower than those marked for the nominative singular with all subjects of Theophanopoulou's experimental study. Although in Stephany's study of spontaneous speech the genitive of feminine nouns is not yet consistently marked by 1;10, genitive and accusative have begun to function as two separate cases. This coincides with what we have found for Christos. According to experimental data, consistent marking of the genitive singular of class II nouns is achieved one and a half years later than with feminine nouns, namely at 4;10 (Stephany 1997).

The beginning distinction of nominal gender and case found in Christos' speech at the turn from the second to his third year gives evidence of an as yet undifferentiated grammatical system, which is characteristic of early child language more generally (Stephany 1992, 1997; Peters 1996; also see Dressler and Karpf 1995). Formally, Christos does not at first distinguish between subclasses of masculine nouns and functionally, the genitive is limited to expressing possession.

The study of the early stages of developing case distinctions in the noun by a Greek monolingual boy presented in this paper provides further evidence for the view that "the acquisition of inflectional categories as well as of linguistic entities and regularities more generally is not a question of all or nothing and use of a form carrying a given inflectional marker does not necessarily mean full 'acquisition' of the grammatical category it expresses" (Stephany 1997). One would therefore be misguided in looking for a specific point in time at which a child could be accredited with having 'acquired' the category of case. Rather, the acquisition of case – as well as of other grammatical categories – must be viewed as a gradual process during which, based on the most salient and functionally accessible aspects of the input, children construct their own patterns in order to finally arrive at the structure of the adult language and make use of its full range of forms and functions (also see Karpf 1990 and Peters 1996).

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