Now you hear it, now you don’t; what happens with functional categories in children’s early speech?

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Introduction

The purpose of this paper is to investigate the status of functional categories in children’s early speech analysing a small piece of data from Greek speaking children. However, this is only a brief piece of research, since the rest of the data has not been transcribed yet, and hence it’s just an initial attempt to explain a few observed phenomena of Eve’s speech.

In previous research (Doukas, 2003) analyses of naturalistic speech corpora have shown that embedded clauses are acquired quite early in the course of language acquisition, therefore making the CP layer available to children’s grammar. Additionally, in Doukas 2004, through the study of Root Infinitives, it has been argued that IP layers and other functional categories are operative at children’s grammar as well.

Making reference to a new data base (Doukas 2004-2005, Eve; collection in progress) the current paper will illustrate that functional categories such as IP and CP are fully projected since the very beginning of the language acquisition process, adult like, with the only difference that such stratifications are not present all of the time. From the first analyses (1,7;15 - 1,10;2) of the corpus functional categories appear to be present but do not always active in the child’s grammar; in other words, functional layers occur in certain clauses but are only sporadically attested. Based on the evidence presented, the paper will argue for a new theoretical agenda, according to which functional categories are fully projected since the beginning in children’s language, but they are not projected in all the utterances all of the time, and are not uniformly present until they become fully specified and entirely acquired.

Theoretical background

In previous work (Doukas 2003) I have shown through the analysis of databases of naturalistic speech (corpora of 3 children) that the subjects of the research (Greek-speaking children) used embedded clauses which contain functional categories in their speech, following the adult model of grammatical structure.

More specifically, the empirical results of the research suggested that children supposedly at Stage II (according to Crain & Lillo-Martin) seem to manage and produce complex clauses. In particular, I have shown that the emergence and consequently use of embedding is placed importantly earlier than suggested in other studies.

In many research papers the finding is that children acquire embedded clauses at about 2½-3 years of age, depending on the experience and target circumstances. However, according to what was found in Doukas (2003), functional categories are indeed present in the children’s grammatical system.

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1 As only a portion of a large body of data collected from Eve, the source of the new data base used here, more work remains to be done and is expected to further inform the line of enquiry under investigation here.
Moreover, in Doukas 2004 it was suggested, again through the analysis of various Greek corpora, regarding the status of Root Infinitives, that the IP layer in children’s grammar is organically active in the sense that is projected in the structure, just as in the adult model.

**Functional categories and their structural representation**

Here I will adopt Roussou’s (2000) split CP hypothesis for the structural representation of functional categories and the left periphery. This is summarised in the following structure which contains the positioning of wh-elements as well:

\[
[C \text{ wh} [\text{Cop } \text{oti/an/na/as} [\text{Neg } \text{dhen/min} [\text{CM } \text{tha/ta/na/na} [1 \text{ cl+V...}]])]]
\]

(Roussou, 2000)

According to Roussou, wh-elements move from the lower layers to the CP (the highest of the projections), whereas Greek embedding operators such as *oti* and *an* are positioned at the C-operator layer. Following this is the position of Negation and then the C-modal layer, which contains the modals *tha*, *na* and *as*.

Regarding the representation of relative clauses, Roussou proposes the following structure:

\[
[C \text{ pu} [\text{Topic/Focus} \text{Cop } \text{oti/an/na/as} [\text{Neg } \text{dhen/min} [\text{CM } \text{tha/ta/na/na} [1 \text{ cl+V...}]])]]
\]

according to which the subordinator *pu* is positioned at the head of the CP (same layer as for the wh-elements), before the Topic and Focus phrases.

Finally, imperative verbs move to the middle C head (Cop). According to Roussou, this movement accounts for its complementary distribution with *na* (and *as*). When negation is present, V-movement is blocked. In this case the imperative morphology is not available and the verb is realised in a position inside the I domain, following clitics.

**The data**

The data used for this paper is a primary corpus of naturalistic speech in Modern Greek, ‘Eve’s corpus’. The collection is still in progress for a total of approximately 20 tapes, but for the present analysis only 5 tape recordings were used, namely, 1;7.15 – 1;10.2 (i.e. 1 year, 7 months, 15 days of age). The tape recordings have been analysed manually and transcribed into documents following the CHAT transcription model used at CHILDES.

‘Maria’s corpus’ (Doukas, 2004) in Modern Greek was used as well for the comparison of the results (8 tape recordings 2;0.24 – 2;8.27).

**The sentences**

The analysis of the data from the transcriptions was based on the following criteria. All sentences with a verb were considered. A few non-verbal utterances were included in the analysis as well, but only when it was clear from the context that some sort of verbal
features were meant, although not phonetically expressed. Checking for functional categories and other functional nuclei makes it natural to look mainly at verbal sentences rather than non-verbal ones, so utterances indicating the presence of such material have been used for the present analysis, for example embedded clauses, imperatives and wh-questions. In the following examples only well-formed utterances were used for the sake of arguing for the explanation of such phenomena in the child’s speech production, but many of the sentences initially considered had to be later discharged from the analysis due to reasons of ill-formedness. Moreover, the well-formed sentences presented below, constitute exceptions to the general picture of Eve’s speech, in the sense that they are extremely adult-like in their structure and syntactic configuration, whereas the overall type of Eve’s utterances is not. This conforms to the general grammatical development of children at the same age.

To be more specific as regards the sentences analysed, embedded clause have been considered and presented in this analysis because they presuppose the presence of functional material, as embedded clauses mostly should involve the CP layer among others.

Imperative constructions have also been analysed because, according to the syntactic model adopted in this paper, imperatives occupy the middle C head (Cop) after movement. Both the generation site and landing site are functionally active because they facilitate the movement, and without doubt the movement of the verb can be considered as part of the adult like model too.

Finally, interrogative sentences have been considered in the analyses, for obvious reasons, namely because they involve wh-movement to the higher of the CP series of layers, i.e. C head.

In the following set of examples, we can see some well-formed utterances from Eve’s speech. The first lot of sentences involve processes of embedding, the second imperative verbs and finally, the third group contains interrogative sentences. The examples given in 1, 2, 3 and 4 are “exceptionally” well-formed sentences, fact which is not very common among the same age population in what regards language acquisition. As a result we can consider Eve to be at a higher level of grammatical competence and development, compared to other children at her age. However, the presence of these examples so early in a child’s grammatical growth reveals the presence of functional categories in the course of language acquisition and the similarities to the adult grammar.

1. Embedding

Tha ti vothisume na diplosi ta rucha
will her-Cl help-1pl SUBJ fold the clothes
“We will help her to fold the clothes”

Thelo na peksume tin kunja bela
I want SUBJN to play the swing
“I want to play at the swing”

Lei oti mpeni mesa eki
Says-3sg that enters inside there
“He/she says that it goes inside there”
2. Imperatives

kita to petao, bam
Look-IMPER it-Cl throw, bam
“Look, I am throwing it, bam”

Fola lucha uu, fola ta lucha su
wear-IMPER clothes oo, wear-IMPER the clothes your
“Wear clothes oo, wear your clothes”

3. Interrogatives

pu ine itsikulata?
Where is-3SG the chocolate
“Where is the chocolate (intended bar)?”

Pu ine o Nikolakis?
Where is-3SG the Nicholas-DIM
“Where is little Nicholas?”

Pu ine kilaki?
Where is-3SG dog-DIM
“Where is the doggy?”

4. More interrogatives

pu’ se re Thoma?
Where are-2SG discourse particle Thomas-VOC
“Where are you Thomas?”

Pu’ ne to nelaki mu?
Where is-3SG the water-DIM my
“Where is my water?”

Pu ine afto?
Where is-3SG this
“Where is this?”
The Structures

a) tha ti voithisme na diplosi ta rucha

What we observe from the above structure is the resemblance of the child’s tree diagram to the adult one, in what regards the projection of both lexical and functional categories. More specifically, the presence of the intermediate CP layers (COperator and CMood) accommodates both the functional material for the embedding process (namely the secondary clause) as well as the modal na movement from the CMood to the COperator. Moreover, the presence of the higher CMood projection contains the modal operator tha which marks the Future Tense. Clearly, functional categories are specified in Eve’s tree diagram, according to the adult model of syntactic representation.
b) *fola ta lucha su*

Additionally, in the above structure the presence of the imperative verb and the assumed movement of this from the verb base generation position to the C_{Op} position confirm once again the presence of the functional material in the structure necessary to hold the verb and the movement.

c) *pu' ne o Nikolakis?*

Finally, in the wh-question structure in c), the wh-movement provides evidence of the existence of the higher CP layers which host the moved wh-element.
**Functional categories; presence/absence**

In the above structures we saw the various trees representing Eve’s speech production, namely embedded clauses, imperatives and interrogative clauses. According to the structural representations adopted, it is clear that Eve’s sentences contain elements that demonstrate the presence of functional categories. In the subordinate clauses, for instance, the tree diagram is fully projected and contains all the functional categories - as implied by the presence of the modal morpheme *na* and its movement - following the adult model, whereas the imperative verbs show the active presence of the intermediate layers of the CP complex.

Finally, the examples with interrogative clauses clearly demonstrate the use and occurrence of the higher part of the functional material in the clause, namely the CP. Interrogative clauses are of particular interest in Eve’s speech production, as the following phenomenon was noticed since the production of her very first sentences. While Eve appears to productively use interrogative clauses and wh-movement, a fact which demonstrates the presence of the higher CP fraction of the clause, such sentences are not stably represented in her speech production in the sense that sometimes wh-elements are omitted from the utterance and hence there is no movement; in other words, sometimes it seems that the CP layer is active and others not and thus sometimes it is projected and others not. Eve’s reduced interrogatives (5) are produced without any wh-material or movement.

This is, while the existence of the interrogative sentences here is a proof of the presence of the CP layer in Eve’s speech, in some other cases wh-questions lack both the wh-element and consequently the wh-movement, as well as other vital parts of the structure i.e. the verb in some cases, where the sentences are understood to be interrogative only from the context. Such sentences are cited in 5 below.

5. **Some more interrogatives**

Ta v(r)akja mu?
the-PL-Neu pants my
“My pants?”

I tateta mu?
the-SG-Fem tape my
“My tape”
As we can clearly see from the above examples Eve produces interrogative clauses omitting the wh-element and this is problematic for the theoretical framework of language acquisition for a series of reasons. Moreover, the omission of other material in these examples, such as the predicate, generates a series of implications for the structural representation. In these instances the full wh-question would have been ‘pu ine i tateta mu’.

One potential implication that someone might put forward here, is that these sentences are elliptical wh-questions of the form: ‘as for me pants, where are they? As for my tape, where is it?’ In adult English speech these elliptical forms can be used and the same is possible in adult Greek too, that is the remaining overt element is determined by a deleted verb. Moreover, it might be maintained that these are not true wh-questions due to the overt fragment being more of just a topic, some thing like ‘And Mary?’. Finally, one could actually propose that the interrogative clauses we have seen in 3 and 4 are simply “frozen expressions” and they are not similar to the adult grammatical structures in any way.

Significantly, many questions and doubts arise on whether the functional categories that so far we proposed to be present in children’s speech are really operative/active and thus projected or not. The paradigm of interrogative clauses, however, appears to be used in a productive way by the child.

Alongside the elliptical interrogative sentences, come other reduced structures in Eve’s speech, which can also indicate the absence of functional categories; in other words, in sentences in 6 the verb is omitted, but the wh-element is in place.

6. Reduced sentences

pu to dedei?
Where the horsey
“Where is the horsey?”

Pu kaskades?
Where kaskader
“Where is the kaskader?”

pu Ø to dedei?

So far and especially in previous research I have argued for the Full Competence Hypothesis, namely that all functional categories are fully projected in the child’s speech since the very beginning. Now things appear to be more complicated with the presence of the above reduced material.

There is good evidence, I believe, that functional categories are present and apparently operative in child’s speech, but such projections are just present sporadically. Based on the fact that the sentences in 5 (the reduced interrogative ones) are only few in the production of the child (about 0.5% of the total), I will suggest that the interrogatives in 3 and 4 (the fully projected ones) do not differ at all from the adult model, i.e. they are entirely projected and specified.

Finally, as regards the reduced ones in 6, I believe that the functional material is indeed projected in the underlying structure built by the child in her utterances, but that it is not always overtly operative until later on in acquisition.
Conclusive remarks
In this paper I have argued that children at a very young age use functional material in their speech production and this makes their grammar adult like.

The findings from the analysis of a new corpus further support the above statement, but at the same time it was noticed that some reduced forms of the produced sentences appear to be problematic for the theory.

My analysis hypothesises that functional categories are present, but some times operative and other times not so. Nevertheless, such layers can be assumed to be fully projected since the beginning of acquisition.

The data analysed here is, however, only the tip of the iceberg and much work remains to incorporate the significant remainder of Eve’s corpus in the analysis proposed.

References