Narrative insights from 6-7-year-old Greek-Albanian children

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Abstract
This study reports on the experimental investigation of narrative production by 6-7 year-old typically developing Greek-Albanian children. The aim is to examine bilingual production in story Telling and story Retelling in order to investigate the role of priming reference tracking but also lexical and grammatical aspects of narrative production. Studies employing story Retelling techniques report a positive effect of priming reference in production (Hendrickson & Shapiro 2001). The results of the investigation suggest that the children's performance improved in Retelling on micro- and macrostructure in L1 and L2. Reference tracking also improves in the Retelling condition, more evidently in the dominant (Greek) than in the weaker language of the bilingual child.

Keywords: bilingual children, narratives, Telling, Retelling, microstructure, macrostructure, character reference

1. Introduction

Narratives have been the subject of intensive study in recent years, as they are believed to effectively involve the entire range of linguistic as well as cognitive functions. Narrative production can be elicited with picture-based sequences with no language support for story Telling and with language support for Retelling. The comparison between Telling and Retelling abilities aims to investigate the role of priming in micro- and macrostructure properties of the narrative. With respect to macrostructure, we investigate the use of referential forms such as definite and indefinite DPs, overt and null pronouns in the two narrative modes. In studies conducted by Schneider and Dubé (1997, 2005) children have been reported to improve in terms of story information and referential functions with story characters in the Retelling compared to the Telling mode.

Previous studies have shown that children's narrative development is a lengthy process which continues well into the school years (Berman 2004) and is closely related to discourse pragmatic development. In the course of this development the length and the syntactic complexity of children's narratives increase as the children learn to map syntactic and discourse-pragmatic functions onto linguistic forms in order to create coherence. Research has shown that children from monolingual and bilingual backgrounds rely on similar strategies for global discourse production, i.e. planning and organisational structure. Some of the recent psycholinguistic research that has investigated the way and the extent to which bilingual children's narrative abilities in both languages compare has focused on discourse-pragmatic development, more specifically character-reference. However, these studies give us an inconclusive picture as regards the performance of bilinguals compared to their monolingual peers with respect to character reference. For instance, Serratrice (2007) found that simultaneous English-Italian bilinguals show similar performance to their monolingual peers when marking character reference in oral story-Telling from the age of about eight years old. Studies with English-Chinese early successive bilinguals in the US, on the other hand, show slightly more variability in marking character reference in story narration compared to monolinguals (Chen & Pan 2009; Chen & Lei 2012).

The present study reports on the experimental investigation of narrative production by 6-7 year-old typically developing Greek-Albanian children. The aim is to examine bilingual production in story Telling and Retelling in order to compare micro- and macrostructure properties of narratives concentrating on coherence established through reference tracking. Another element in the present study is the evaluation of structural complexity, which is part of coherence. In this respect, Friedman (2005) has claimed that temporal ordering is a complex skill that continues to develop across childhood. For our study, character reference was measured in terms of appropriateness of referential forms used in each language with respect to the discourse function, i.e. Introduction, Maintenance and Reintroduction (Arnold & Griffin 2007).

2. Research questions

The aims of the study are to examine bilingual children's performance on narrative production in both languages, that is Greek and Albanian, and to examine possible

differences between L1 and L2 narrative structure. We use two different narrative modes, namely Telling and Retelling for both languages (L1 and L2). Children's narratives are analysed in terms of basic macrostructure properties, namely story grammar and internal state terms, and coherence through reference tracking. We also analyse microstructure properties, based on morphosyntactic and lexical measures.

3. The study

3.1 Participants

Twenty-six children participated in the study. One group of 6 bilingual Greek-Albanian children were recruited from three state schools in Thessaloniki. All children attended the 1st grade of primary school. At the time of testing, the Bilingual group had a mean age of 6,6 yrs (Female: 4 & Male: 2). A linguistic background questionnaire was distributed to the parents of participants and the information collected is presented in Table 1.

Subject	Age	L1	L2	Dominant Language
KM	6,6	Albanian	Greek	Greek
IM	6,9	Albanian	Greek	Greek
DM	6,11	Albanian	Greek	Balanced
KT	7	Albanian	Greek	Balanced
EL	6,5	Albanian	Greek	Albanian
OD	6,6	Albanian	Greek	Balanced

Table 1. *Bilingual Participants Profile*

Additionally, two control groups of monolingual speakers of Greek (10 participants) and Albanian (10 participants) participated in the study. At the time of testing, the Greek monolingual group had a mean age of 6,7 (Female: 6 & Male: 4) and were also recruited from Greek state schools, whereas the Albanian monolingual group had a mean age of 6,5 (Female: 5 & Male: 5) and were recruited from Albanian state schools.

3.2 Materials

The four stories developed in the COST Action IS0804 (Gagarina, Reichenbach & Skerra 2012) were used for this study. Two of the stories were used for Albanian and two for Greek. In each language and in each pair of stories, one was used for Telling and one for Retelling. The story text used for Retelling has been developed for

Albanian and Greek within the above mentioned COST Action. An analysis of microstructure and macrostructure was carried out. Furthermore, comprehension questions are also included in order to test the child's ability to follow the structure of the narratives.

3.3 Procedure

The four stories used were divided into two groups in terms of number of main characters; the *baby goats* and *baby birds* stories included three characters while the *dog* and *cat* stories had four characters. Both Telling and Retelling modes were used per language. Specifically, the stories are used in a cross-mode and cross-language fashion: The Baby birds and the Dog story are used for one language and Baby goats and the Cat for the second language, and vice versa. One story in each language is used for Telling and one for Retelling.

In the Retelling task, the child is shown three coloured envelopes on the computer screen and is asked to open one of them which includes one of the stories. Then the child hears the story with headphones while being shown two pictures at a time. Finally, the child is asked to retell the story to the investigator who has not been listening to the story or looking at the pictures. The Retelling mode provides information about how much of the original model story the children can recall including lexical items and grammatical structures. Each child retells one story in a Greek session and the other one in the Albanian session.

In the Telling task the child is presented with the story pictures once and then two-by-two in order to tell the story of her own-making. The 'Telling' format is presumed to be more difficult, since the child is required to generate his/her own story without the benefit of a prior model.

Despite the fact that the stories were different, we allowed for an interval space between the two language sessions of 5-7 days in order to avoid cross language transfer.

3.4 Measures

3.4.1 Macrostructure

In the macrostructure measures we evaluated structural complexity and internal (mental) state terms. Complexity is based on the number and structure of episodes per story. Each story is divided into three episodes. Each episode consists of (i) a Goal for

the main character (MC), (ii) an Attempt by the MC to reach the goal, and (iii) an Outcome of the attempt in terms of the goal. The maximum score in each story was 9 points. To calculate internal state terms we considered linguistic verbs (such as 'shout, 'say'), i.e. 'verbs of say', cognitive verbs (such as 'think', 'wonder') and other lexical items expressing emotion (e.g. 'sad', 'angry') (see also Gagarina et al. 2012 for more details on the variables included in the coding procedure).

3.4.2 Microstructure

Microstructure measures include a wide range of linguistic features. More specifically, the microstructure of a narrative can be defined as linguistic structure at the lexical and syntactic level and it is used to evaluate the productivity and complexity of children's language by calculating form and content linguistic devices both sententially and inter-sententially (Hughes, McGillvray & Schmidek 1997). For the purposes of this study, we calculated number of verb-clauses, number of subordinations/coordinations, and number of content and function words in Telling and Retelling. The number of clausal coordination and subordination was established in relation to the number of overall clauses produced by the child. To this end we considered only clausal coordinations and adverbial, infinitival, complement and relative clause subordination.

3.4.3 Comprehension questions

After the child's Telling or Retelling of the story, we asked him/her a set of comprehension questions. Nine questions were asked for each story. The design of the questions (Gagarina et al. 2012) is the following: Three questions elicited goal statements, e.g. "Why does the mother bird fly away?" Another group of three questions elicited internal state terms connected either to the initiating event or to the characters' reaction to events in the story. Finally, three questions aimed at the elicitation of inferences, e.g. "Who does the mother goat like best, the fox or the bird? Why?" Our aim is to see if the child can infer meaning about the story as a whole.

3.4.4 Character Reference

We also evaluated the use of referential forms for tracking character reference in the functions of Introduction (i.e. the first mention of a character in a discourse), Maintenance (the immediately subsequent mention of a character), and

Reintroduction (the reappearance of an already introduced character). The linguistic forms evaluated for the above referential functions are definite and indefinite noun phrases and null and overt pronouns. Many studies employing story Retelling techniques report a positive effect of priming reference in production (for instance, Hendrickson & Shapiro 2001). Hickmann and Hendriks (1999) found that appropriate marking of character Introduction develops later than co-reference (maintenance) instances in monolinguals too. Schneider and Hayward (2010) suggest that between the ages of 4 to 7 children appear to improve in the use of referring expressions to introduce characters and objects, whereas by the age of 7 this ability appears to be mastered.

4. Microstructure results

4.1 Narrative length: Number of verb-clauses

Number of verb clauses was used as a measure of narrative length. As shown in Figure 1, the number of verb-clauses is higher for Greek than Albanian. More specifically, post-hoc tests in telling and retelling have shown that Greek monolinguals and bilinguals in Greek have produced significantly longer stories than Albanian monolinguals and bilinguals in Albanian (p=.004 and p=.012 for the difference in telling between monolingual in Greek vs. monolingual in Albanian and bilingual in Greek vs. bilingual in Albanian, and p=.003 and p=.001 for the difference in retelling between monolingual in Greek vs. monolingual in Albanian and bilingual in Greek vs. bilingual in Albanian, respectively). Analyses of variance conducted for each group with narrative mode (telling vs. retelling) as the independent variable have revealed that retelling has contributed to a considerable increase in the number of verb clauses for Greek monolinguals (F(1, 38)=5.841, p=.004), for Albanian monolinguals (F(1, 38)=11.334, p=.001), for bilinguals in Greek (F(1, 38)=4.986, p=.003), and for bilinguals in Albanian (F(1, 38)=5.651, p=.004). Figure 1 presents the mean raw numbers of verb-clauses per group.

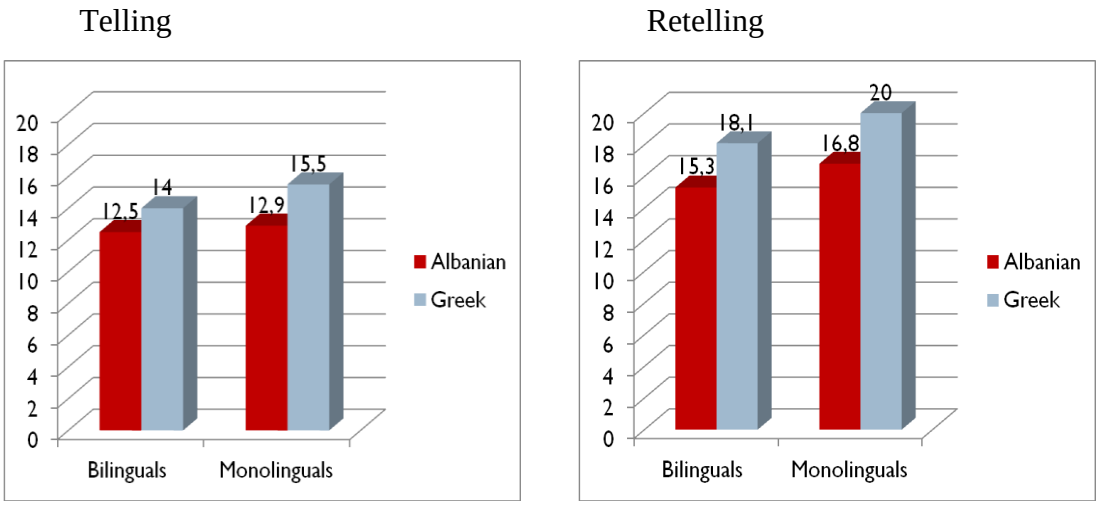

Figure 1. *Verb-clauses in Telling and Retelling*

4.2 Syntactic complexity: Number of Subordinate vs. Coordinate clauses

We next present the results from number of subordinate clauses in Telling and Retelling. The statistical analyses (paired sample T-test) that we conducted in the two languages (Greek and Albanian) revealed statistically significant difference only in telling (bilingual children: $t(5)=5.113$, $p=.000$). In other words, the bilingual children use significantly more subordinate clauses in Greek narrative Telling than in Albanian.

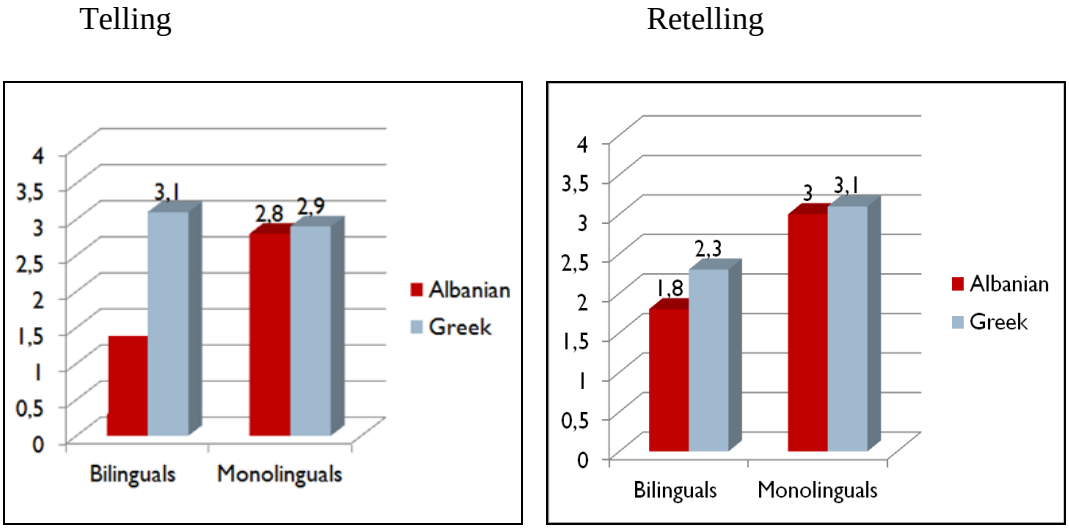

Figure 2. *Subordinations in Telling and Retelling*

With regard to the use of clause-coordination the paired sample T-test revealed, that the two monolingual groups differ $t(9)=3.441$ ($p=.001$) in the Telling mode.

Specifically, the Albanian monolingual group uses significantly fewer coordinate clauses as compared to Greek monolinguals. This is also the case when comparing monolingual Albanian children with the bilingual children in the Telling mode in Albanian. Bilingual children produce more clause-coordination than their monolingual peers, p=.002.

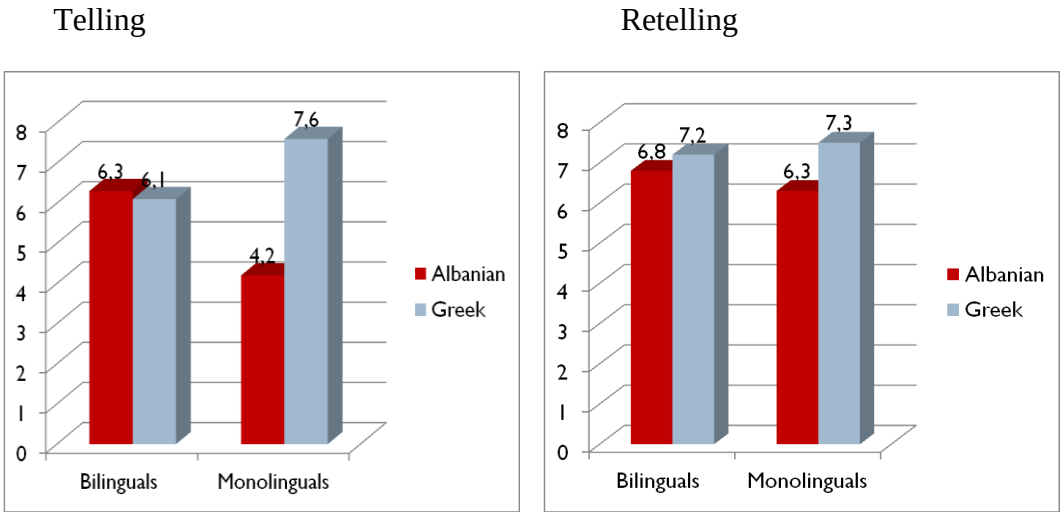

Figure 3. *Coordinations in Telling and Retelling*

4.3 Microstructure: Content vs. Function words

In the evaluation of content and function words in the Telling and Retelling modes, there are no significant differences found between or within groups. However, a tendency to increase the number of content and function words in story Retelling compared to story Telling is attested here. This is expected, since, when the child has been primed in a story, then s/he seems to have an increased ability in using and manipulating all aspects of language structure and use.

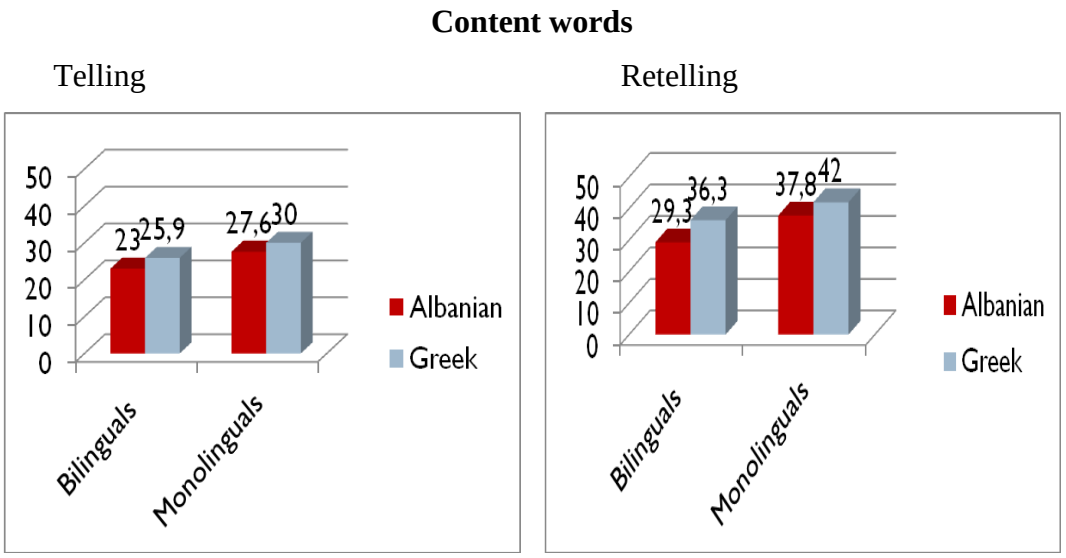

Figure 4. *Content words in Telling and Retelling*

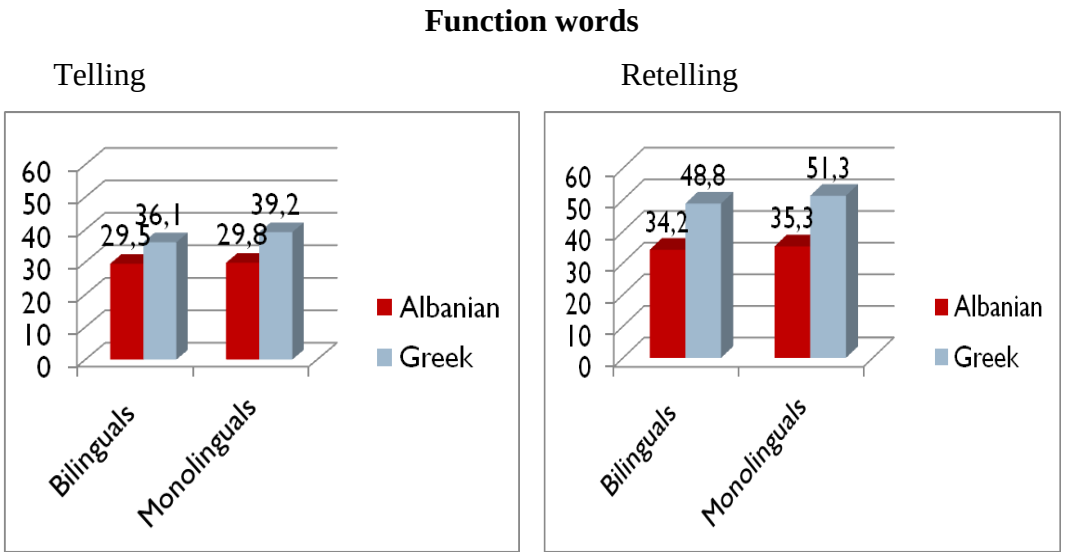

Figure 5. *Function words in Telling and Retelling*

5. Macrostructure results

5.1 Structural complexity

As mentioned above, the maximum score for stories' structural complexity was 9 points. The results paired sample t-test analysis show that in the Telling mode bilingual children score higher in Greek $t(5)=4.223$, $p=.000$) and this is also the case for the monolingual Greek compared to the monolingual Albanian children $t(9)=4.331$, $p=.000$). As shown in Figure 6 below in the Retelling mode we have higher scores in all groups except for Greek monolinguals. More specifically analysis

of variance, conducted for each group with narrative mode (telling vs. retelling) as the independent variable have revealed that retelling has contributed to a considerable increase in the score of structural complexity, for Albanian monolinguals ($F(3, 28)=8.234$, $p=.001$), for bilinguals in Greek ($F(3, 28)=5.182$, $p=.003$), and for bilinguals in Albanian ($F(3, 28)=5.432$, $p=.004$). Figure 6 present the mean raw numbers of structural complexity per group.

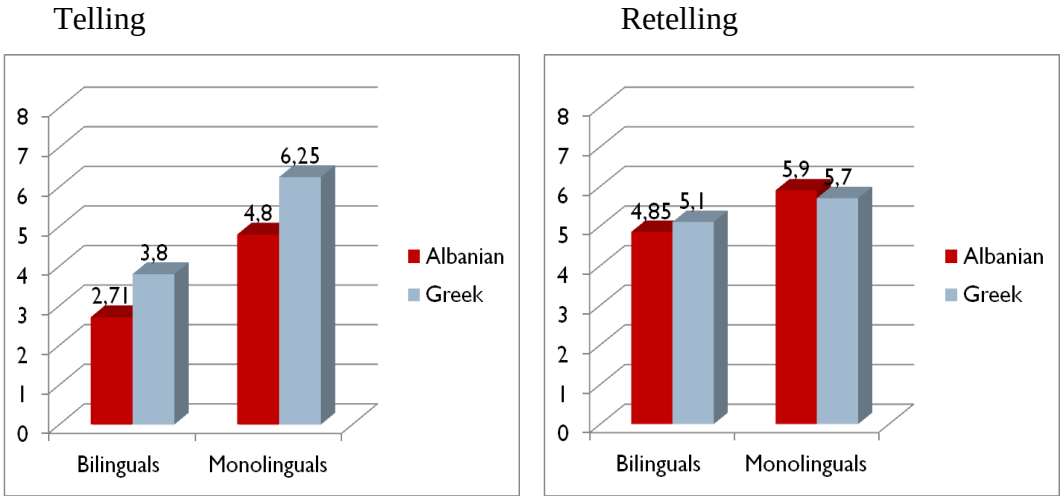

Figure 6. *Structural complexity in Telling and Retelling*

5.2 Mental State Terms

According to mental state terms, Greek scores are higher in both Telling and Retelling although no statistically significant differences are found between groups. Figure 7 presents the mean raw numbers of mental state terms per group.

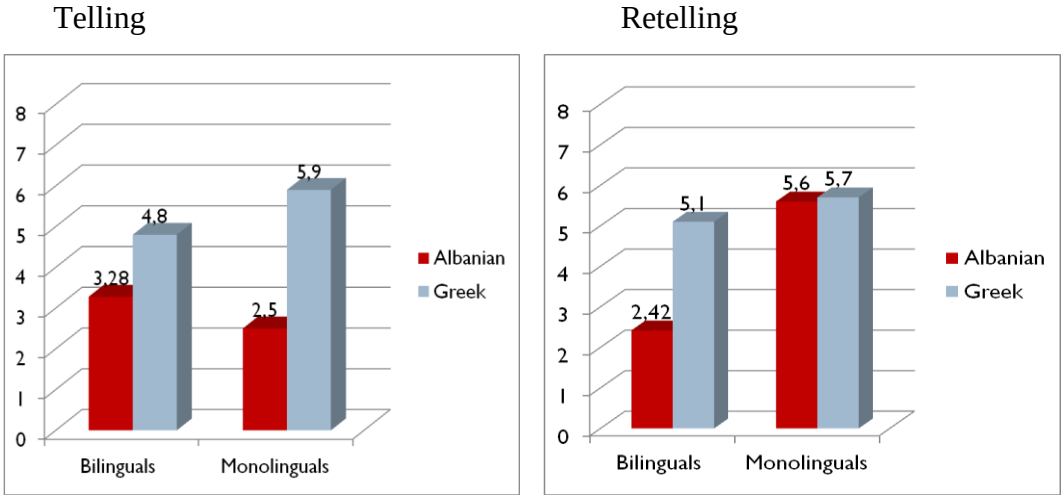

Figure 7. *Mental state terms in Telling and Retelling*

5.3 Comprehension questions

Comprehension questions are also included to test coherence in the child's ability to follow the story structure. For this parameter we have only Greek data. The maximum score was 9 points. The Greek monolinguals achieved 100% accuracy for both Telling and Retelling, however there was statistical significant difference for the bilinguals (in Greek task), who achieved 100% accuracy in the Retelling mode, whereas in the Telling they achieved 78% and differ from their monolingual peers (p=.000).

6. Character-Reference

As we mentioned above, we measure the character reference in the Introduction, Maintenance and Reintroduction. For these categories we measure i) Definite DPs, ii) Indefinite DPs, iii) Null pronouns and iv) Overt pronouns. Some examples are presented below:

(1a) Definite DP – Inappropriate (Introduction)

Mia mera *o* skilos pige na piasi to pontiki.

one day *the*-MASC.-SING.-NOM *dog*-SING-NOM tryPAST-3s. sub. chase the rat -SING-ACC

"one day the dog tried to chase the mouse"

(2b) Indefinite DP – Appropriate (Introduction)

Mia fora ki enan kero itan mia gata

once upon a time was-PAST-3s a- FEM.-SING.-NOM. cat- SING NOM

"Once upon a time there was a cat"

(3c) Null – Appropriate (Maintenance)

Mia mera pige na piasi to pontiki.

one day NULL-SING-NOM try-PAST-3s to chase the rat -SING-ACC

"one day tried to chase the rat"

(4d) Overt pronoun - Appropriate (Maintenance)

Mia mera *aftos* pige na piasi to pontiki.

one day *he*-SING-NOM try-PAST-3s to chase –INF the rat -SING-ACC

"one day it tried to chase the rat"

For character reference we calculate % by dividing form frequency by the number of participants in each group. The analysis of the results shows that neither

monolingual group (Albanian & Greek) differs from the bilinguals. However, different patterns seem to be followed in each language: the statistical analysis of Telling vs. Retelling per language shows that Greek and Albanian exhibit statistically significant differences in the categories of definite, indefinite, null and overt pronouns. The data reported in Figure 8 show that both bilinguals and monolinguals significantly prefer to use indefinites for character introduction in Greek narratives. On the other hand, bilinguals and monolinguals prefer to use the definite for character introduction in Albanian narratives. This observation was statistically significant and supported by paired sample T-tests in the following categories: Bilingual group's indefinite NP production in Greek vs Albanian in Telling and Retelling, p=.001, p=.000; Bilinguals (Definite in Retelling/Telling in Greek) and (Definite in Retelling/Telling in Albanian), p=.000, p=.001; Monolingual Greek (Definite in Retelling/Telling) and Monolingual Albanian (Definite in Retelling/Telling), p=.000, p=.003.

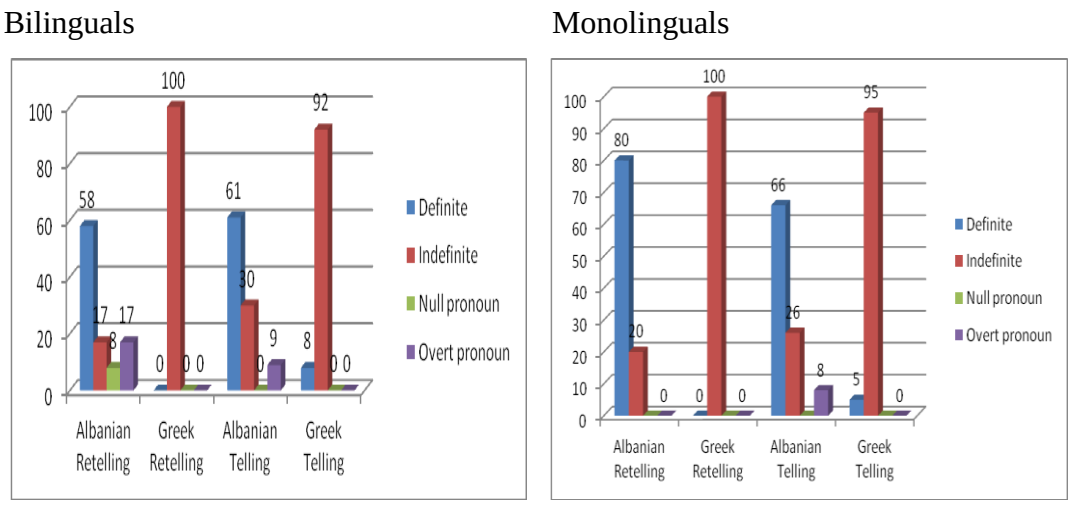

Figure 8. *Character introduction in Telling and Retelling*

For character maintenance we observe that the bilingual group's production in Greek narratives) follows a different pattern from that of Greek monolingual children. The data are presented in Figure 9. Specifically, the bilinguals prefer the use of a definite NP 80% of the time in the Telling mode and 72% in the Retelling mode while the remaining uses are mostly of null pronouns. The group of Greek monolinguals, however, differs since the use of definite NP and null is almost equally divided in both the Telling and the Retelling modes. On the other hand, the bilinguals'

production in Albanian and the monolingual Albanian group follow a similar pattern for character maintenance. Their higher preference is for the null pronoun, followed by the definite NP, overt pronouns and finally the indefinite. The statistical analysis (paired sample T-test) Telling vs Retelling per language shows statistically significant differences in the following categories: Bilingual group's indefinite NP production in Greek vs Albanian in Telling, p=.001; Bilingual group's definite NP production in Greek vs Albanian in Telling and Retelling, p=.001, p=.003; Bilinguals' Null pronoun production in both Greek and Albanian is statistically significant only in Retelling, p=.003; Bilinguals' Overt Pronoun production in both Retelling and Telling and in both Greek and Albanian is statistically significant, p=.000, p=.001. Similarly, we observe a statistically significant difference between Monolinguals Greek (Definite in Retelling/Telling) and Monolinguals Albanian (Definite in Retelling/Telling) with the results of the measurements showing respectively for the two languages, p=.001 and p=.003; finally, a similar significant difference is observed between Monolinguals Greek (Overt Pronoun in Retelling/Telling) and Monolinguals Albanian (Overt Pronoun in Retelling/Telling), p=.000, p=.000.

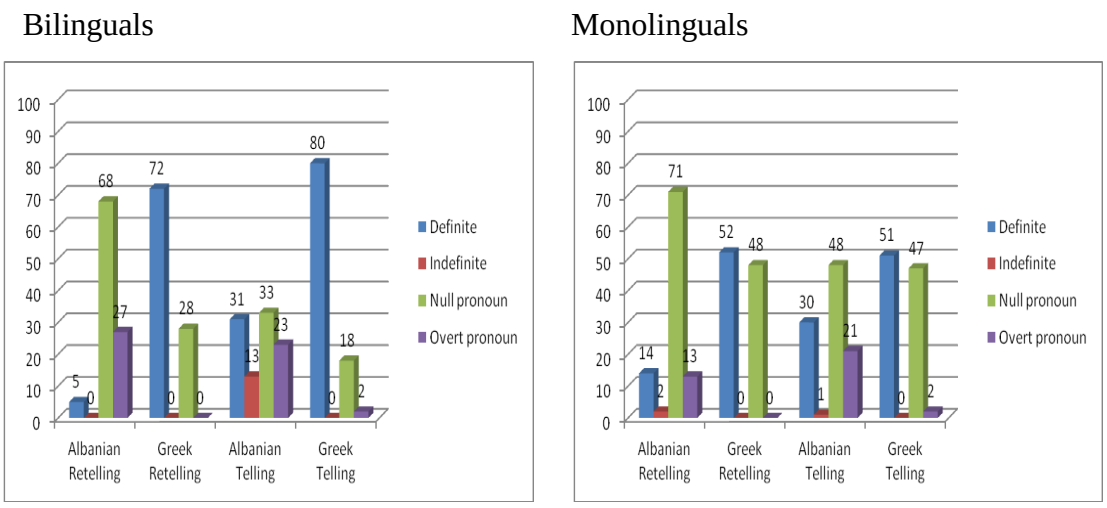

Figure 9. *Character maintenance in Telling and Retelling*

Character reintroduction shows a similar pattern in Telling between bilinguals and monolinguals in the use of definite NPs in Greek but with higher percentages for the bilingual group. In the Retelling mode, all participants prefer the use of a definite NP for reintroduction.

The preference of a definite NP for character reintroduction is clearly present also in bilinguals and monolinguals in Albanian narratives. However, the statistical analysis shows that the difference between the use of definite NPs in Telling vs Retelling within language is statistically significant (Bilinguals Definite in Retelling/Telling in Greek task) and (Definite in Retelling/Telling in Albanian task p=.001, p=.003 respectively). The same pattern is observed in monolinguals, but only in the Telling mode: Definite use in Greek vs. Albanian monolinguals p=.003. Figure 10 present the percentages for character reintroduction per age group.

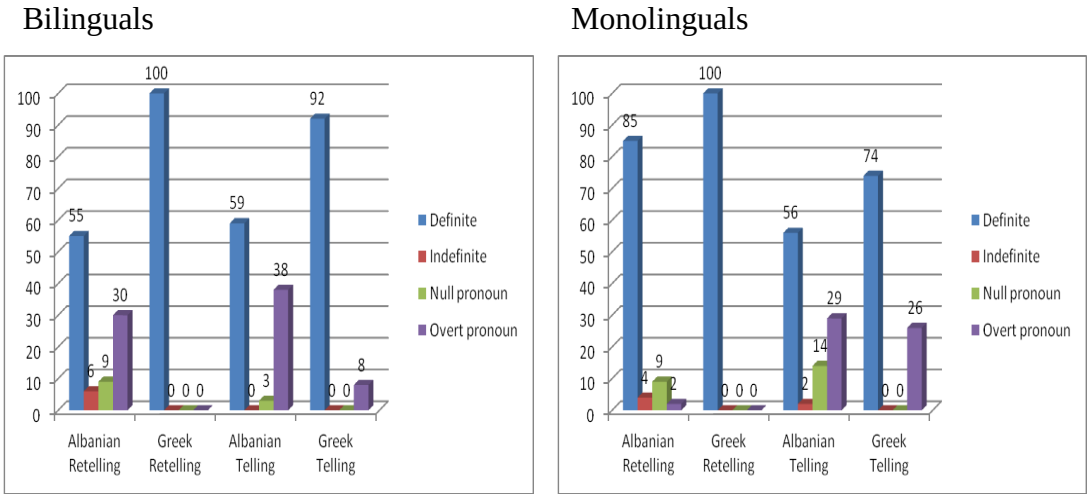

Figure 10. *Character reintroduction in Telling and Retelling*

7. Discussion

This aimed to investigate micro- and macrostructure properties in the picture-based narratives of monolingual Albanian and monolingual Greek as well as bilingual Greek-Albanian children. Two modes of narrative discourse were examined, telling and retelling. The research questions we examined included the possible differences in microstructure measures between monolingual controls and bilinguals in each of the languages tested as well as in the structural complexity of the stories produced as measures of macrostructure. Finally, comprehension questions were used following telling and retelling modes only for Greek narratives. The findings indicate that the mode of narrative production appears to improve the performance of all groups and especially bilinguals in micro- and macrostructure measures. Specifically, narrative length and the use of subordinate clauses increased when monolingual and bilingual children retold narratives. Similarly, the number of content and function words

increased in the retelling mode. No effect was found however on the use of mental state terms in telling vs. retelling mode. Monolingual groups differed in the use of subordinate clause structures: Greek narrative contained more subordinate than the Albanian narrative and this finding also characterized the Greek and Albanian narratives of the bilingual children. Although the number of participants in this study is rather low to draw any safe conclusions, it appears that syntactic structures used in narrative discourse may be subject to crosslinguistic differences over and above issues of language proficiency. Another crosslinguistic difference attested in the monolingual groups which is also reflected in the bilingual narratives is the use of Indefinite NPs for the introduction of a referent. Indefinites are preferred in the Greek controls and the Greek narratives of bilingual children whereas Albanian controls and the bilingual's narratives in Albanian show a preference for a definite NP for the same function. There is however a difference between bilingual and monolingual groups in the use of null pronouns for maintenance of a character previously introduced. Specifically, while bilinguals prefer to use definite NPs monolingual use null pronoun in each of the two languages tested (cf. Sorace et al. 2009). In all, it seems that there is little crosslinguistic influence in the options for character reference in bilingual narratives. Furthermore, no crosslinguistic influence is found in the use of subordinate clauses in bilinguals who seem to follow the preference pattern found in the corresponding control groups.

References

Arnold, J.E. & Z.M. Griffin. 2007. The effect of additional characters on choice of referring expression: Everyone counts. *Journal of Memory and Language* 56: 521-536.

Berman, R. 2004. Between emergence and mastery: The long developmental route of language acquisition. In R. Berman (ed.), *Language development across childhood and adolescence.* Amsterdam & Philadelphia, PA: John Benjamins, 9-34.

Chen, L. & J. Lei. 2012. The production of referring expressions in oral narratives of Chinese-English bilingual speakers and monolingual peers. *Child Language Teaching and Therapy* 29: 41-55.

Chen, L. & N. Pan. 2009. Development of English referring expressions in the narratives of Chinese-English bilinguals. *Bilingualism: Language and Cognition* 12: 429-445.

Friedman, W. J. 2005. Developmental and cognitive perspectives on humans' sense of the times of past and future events. *Learning and Motivation* 36: 145–158.

Gagarina, N., K. Reichenbach & A. Skerra. 2012. *Telling and retelling in Russian-German bilingual preschool children*. COST Meeting IS0804, Berlin.

Hendrickson, V. & L.R. Shapiro. 2001. Cohesive reference devices in children's personal narratives. *Journal of Psychological Inquiry* 6: 17-22.

Hickmann, M. & H. Hendriks. 1999. Cohesion and anaphora in children's narratives: A comparison of English, French, German, and Chinese. *Journal of Child Language* 26: 419-452.

Hughes, D., L. McGillvray & M. Schmidek. 1997. *Guide to narrative language: Procedures for assessments*. Eau Claire, WI: Thinking Publications.

Schneider, P. & R.V. Dubé. 1997. Effect of pictorial versus oral story presentation on children's use of referring expressions in retell. *First Language* 5: 283-302.

Schneider, P. & R.V. Dubé. 2005. Story presentation effects on children's retell content. *American Journal of Speech-Language Pathology* 14: 52-60.

Schneider, P. & D. Hayward. 2010. Who does what to whom: Introduction of referents in children's storytelling from pictures. *Language speech and hearing services in schools* 41: 459-473.

Serratrice, L. 2007. Referential cohesion in the narratives of bilingual English-Italian children and monolingual peers. *Journal of Pragmatics* 39: 1058-1087.

Sorace, A., L. Serratrice, F. Filiaci & M. Baldo. 2009. Discourse conditions on subject pronoun realization: testing the linguistic intuitions of older bilingual children. *Lingua* 119: 460-477.