

ADULT-CHILD INTERACTION AND THE ACQUISITION OF THE BULGARIAN VERBAL ASPECT BY CHILDREN WITH SLI

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Abstract

In discussions of the acquisition of Slavic aspect, it is generally admitted that every situation can be uniquely represented by one of the two (perfective or imperfective) verb forms (within a VP or a clause). Having acquired the formal category of verbal aspect, children are supposed to be able to choose the right alternative rejecting the wrong one. Decisions made in favor of a certain aspectual form over the alternative one, however, are not merely objective; a choice between perfective vs. imperfective verb may signal a “point of view”, and hence reflect “a mental state” (cf. de Villiers & Pyers, 2001). This notion of aspect helps us take into account cognitive, as well as communicative variables responsible for the process of acquiring aspectual distinctions, and offers a better explanation of the fact that aspect in the linguistic context may have more control over the form of children’s replies than the aspectual properties of the situation itself (cf. Weist et al., 1984). Starting from that notion of aspect as reflecting both objective properties of a situation and a perspective, a “point of view” of it, we suggest that the first turn in an interactional sequence may be regarded as a clue for establishing a common ground the speaker and the hearer would share in representing temporal-aspectual properties of an actual or a possible world.

The present paper attempts to show to what extent Bulgarian preschool children with Specific Language Impairment in their acquisition of aspect are capable of relying on contextual prompts. The data reported here are obtained from 5 preschool children (aged 4;2 to 6;0) with SLA and no brain damage or intellectual deficits. Each child

was tape-recorded for 30 minutes during her interaction with an experimenter. The same procedure was applied to 5 age-control subjects and 5 control subjects.

Adult's utterances containing verb units that presuppose certain temporal-aspectual forms in the child's next turn, have been transcribed and taken into account as contextual clues. These contextual clues have been compared to children's responses. Children's sensitivity to their interlocutors' temporal-aspectual perspective is evaluated through measuring adult-child aspectual correspondences.

The paper argues that children with SLI are capable of adapting their own perspective of a situation to the "point of view" of their collocutors, although their ability is underdeveloped in comparison with the children from the control group. The capacity to take advantage of such contextual clues is discussed within the "theory of mind" paradigm as a developing "capacity to compute the contents of other minds" (cf. J. de Villiers, 2001).

INTRODUCTION

In the linguistic and psycholinguistic literature, difference is made between the inherent lexical aspectual categories and their morphological expression. The former are considered as innate (according to Slobin 1985), the prototypical notions of result vs. process are represented in the Basic Child Grammar), whereas the latter are language specific and must be learned.

While the inherent aspectual semantics as a property of each verb unit is represented in the vocabulary and hence is common for all speakers of a specific language, the 'morphological', or 'viewpoint' aspect is to a high degree (at least in the Slavic languages) representing the speaker's subjective decision about the situation to-be-verbalized. This explains the fact that in all Slavic languages the opposition perfective/imperfective has developed numerous modal meanings. If we assume (take into account) that by using perfective vs. imperfective verb forms, a speaker of a Slavic language expresses his/her mental representation which cannot be totally reduced to "objective" properties of the referred situation, we must agree that the acquisition of aspect has

to be discussed within the 'theory of mind' paradigm (cf. Astington & Gopnik 1991; de Villiers 2001, etc.).

In the discussions on the acquisition of Slavic aspect, however, it is generally accepted that each situation can be *uniquely* represented by one of the two aspectual verb forms (Weist et. al., 1984; Gagarina 2000, etc.) within a VP or a clause (about the hierarchy of the aspectual layers cf. Verkuyl's 1972 theory of 'compositional aspect' applied by Lindstedt 1985 to Bulgarian and by Stojanova 2000 to the acquisition of Bulgarian).

Having acquired the whole range of temporal-aspectual morphology, the Bulgarian children are supposed to be able to choose the *right* aspectual alternative rejecting the *wrong* one. But recent data about acquisition of Bulgarian show that decisions about *right* vs. *wrong* aspectual forms are often made on the basis of shared opinion about things happening which are being negotiated along the caregiver-child discourse sequences (Stojanova 2000). Hence, the problem of mapping between meaning and morphology in the acquisition of aspect is additionally complicated - it demands from the child a well developed ability to understand her interlocutor's mind.

The Bulgarian data show that children start answering questions about dynamic properties of situations between 1;6 and 2 years of age. At about 3 years of age children without developmental problems are able to give adequate reactions to prompting utterances with verb forms within 7 out of the 9 tense paradigms with the following aspectual-temporal combinations. The remaining two tense paradigms are absent from the Bulgarian everyday communication.

Most studies on the linguistic development of children with SLI (Specific Language Impairment) have pointed out that these children have special difficulties with verb use (cf. for example Conti-Ramsden & Jones, 1997). In more detailed investigations is searched for semantic, morpho-syntactic or contextual properties of verb that possibly influence these children's behavior (Bonifacio et al., 2001; Sanz-Torrent et al., 2001, etc.).

In this paper, we attempt to answer the following questions:

1) To what extent the Bulgarian preschool children (aged 4;2 to 6;0) with SLI are capable of relying on linguistic contextual prompts in referring to the aspectual-temporal properties of situations they are talking about,
and,

2) To what extent children with SLI, in their capability to take advantage of aspectual prompts, differ from children without developmental problems.

EXPERIMENTAL SETTING

Hypothesis

It was hypothesized that children with SLI are sensitive to their interlocutor's temporal-aspectual perspective, but their capability to take advantage of such contextual prompts is lower than that of children without developmental problems.

Subjects

For testing the hypothesis, two groups of children were selected: an SLI group consisting of 5 children aged between 4;2 and 6;0, and a control group matching the SLA children in age, sex and socio-economic background. Table 1 A and B shows more details about the subjects.

A

Children with SLI	Sex	Chronological Age	Linguistic Age
C1	male	4;2	3;0
C2	male	4;3	3;6
C3	female	4;6	2;9
C4	male	5;11	2;6
C5	female	4;9	3;6

B

Control Group	Sex	Chronological Age
C1	male	4;4
C2	male	4;1
C3	female	4;5
C4	male	5;10
C5	female	4;10

Table 1: *Sex, age and chronological age of the children with SLI (Table 1A); sex and age of the children in the control group (Table 1B)*

Procedure

Each child was tape-recorded for 30 minutes during his/her interaction with a caregiver. The SLA children were diagnosed according to the Bulgarian version of Khomsi's assessment test for language development (Khomsi 1987). A neurological and neuropsychological assessment showed no brain damage or intellectual deficits in these subjects.

The children with SLI were interviewed during one of their therapy sessions. The children from the Control Group were tested individually in the kindergarten.

In a spontaneous dialogue with each of the children, the experimenter used prompting questions or other types of prompting utterances in order to elicit the following 6 different temporal-aspectual forms:

- Present tense (imperfective),

- Aorist (perfective/ imperfective),
- Perfect (perfective/ imperfective),
- Future (perfective/ imperfective),
- Imperfect (imperfective), and
- Pluperfect (perfective/ imperfective).

The Bulgarian temporal system contains three more paradigms, those of Future perfect (Futurum Exactum), Future in the past (Futurum praeteriti), and Future perfect in the past (Futurum exactum praeteriti), but these were excluded from the test procedure because of their extremely low frequency in the colloquial speech.

Examples of the prompting questions are given in the next section (1.a. and 2.a.).

Evaluation procedure

All experimenter's utterances containing verb units that presuppose certain temporal-aspectual forms in the child's next turn have been transcribed and taken into account as contextual clues. These contextual clues have been compared to children's responses. Children's sensitivity to their interlocutors' temporal-aspectual perspective is evaluated through measuring adult-child aspectual correspondences.

The experimenter's prompting utterances which were supposed to serve as contextual clues for children's reactions, together with children's adjacency turns, resulted in two possible types of **transitions**:

- a) In the first transition type, the temporal-aspectual characteristics of the verb in the experimenter's question elicited a verb with the same temporal-aspectual characteristics in the child's answer. This transition type was scored as SAME (example 1).
- b) In the second transition type, the temporal-aspectual characteristics of the verb in the experimenter's question failed to elicit a verb with the same temporal-aspectual characteristics in the child's answer - either aspect, or tense, or both were changed. This transition type was scored as DIFFERENT (example 2).

- 1.a. E: A kakvo misliš, če sled tova **šte se sluči** s momičeto?
And what do you think that after that HAPPEN-FUT-PFV-3rd p.sg. with the girl?
 (And what do you think will happen to the girl?)
- b.C1 (SLI): Sled tova šte se ubie i **šte padne**.
After that (she) HIT- FUT-PFV-3rd p.sg-refl and FALL- FUT-PFV-3rd p.sg down.
 (After that she will hit herself and will fall down.)
- 2.a. E: Možeš li da si spomniš kakvo **e napravil** Žoro?
Can-pres-impf-2nd p.sg you remember-pres-pfv-2nd p.sg what DO-PERFECT-PFV-3rd p.sg Žoro?
 (Can you remember what Žoro has done?)
- b. C1 (SLI): Emi **bie**.
Well, (he) BEAT-PRES-IMPV-3rd p.sg.
 (Well, he beats.)

Prompting utterances in PRESENT TENSE were not scored because they can elicit only imperfective forms: the perfective aspect is incompatible with the main temporal meaning of present, the one that refers to an ‘ongoing event’. Present perfective forms can only be used in combination with modal verbs as well as in different kinds of hypotactic clauses. Although the same is true for IMPERFECT (perfective imperfect forms can not be elicited in a simple dialogue; they are used in very special contexts, predominantly in hypotactic clauses), the imperfective imperfect tense forms were not excluded from our study because of the fact that IMPERFECT is a part of a more complex aspectual opposition, the one between AORIST and IMPERFECT.

RESULTS

Quantitative analysis

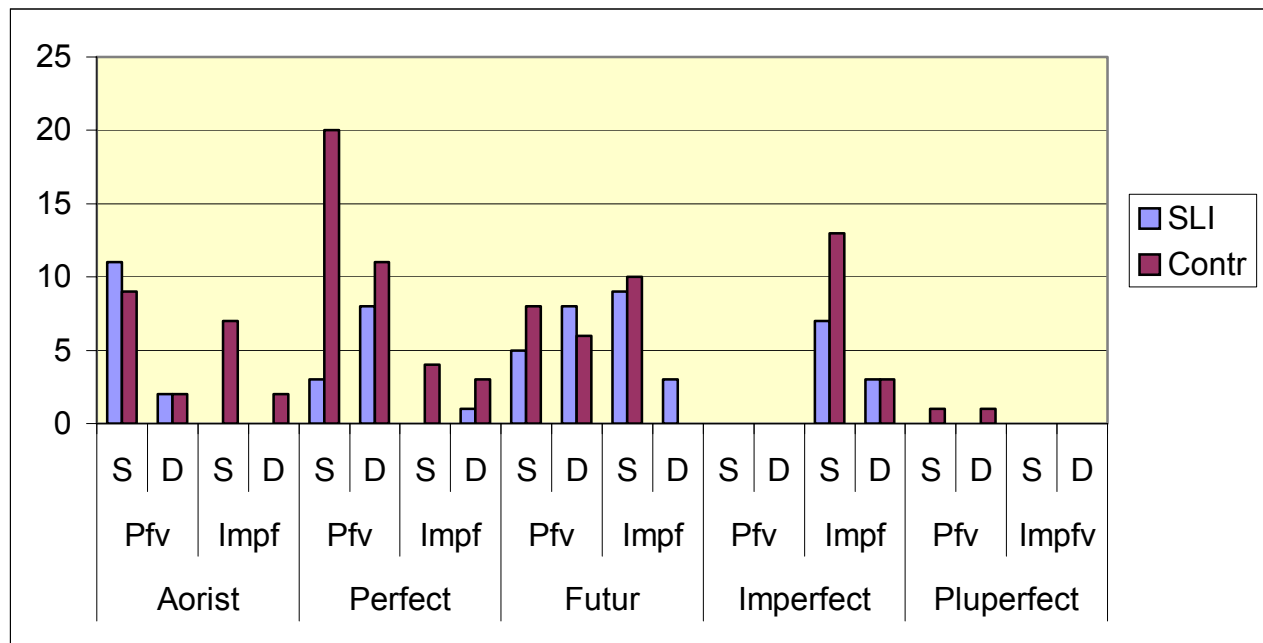
All SAME and DIFFERENT transitions given by the SLI subjects and by the control group were counted and summarized for each of the above mentioned temporal-aspectual combinations.

The results are presented in Table 2 and in Figure 1.

Table 2: Total number of similar vs. different temporal-aspectual forms scored by the children with SLI and by the control group

	Aorist				Perfect				Futur				Imperfect				Pluperfect			
	Pfv		Impf		Pfv		Impf		Pfv		Impf		Pfv		Impf		Pfv		Impf	
	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D
SLI	1	2	0	0	3	8	0	1	5	8	9	3	0	0	7	3	0	0	0	0
Cont r	9	2	7	2	2	1	4	3	8	6	1	0	0	0	1	3	1	1		

Figure 1: SAME vs. DIFFERENT temporal-aspectual reactions scored by the children with SLI and by the control group



The results show that the children of the two groups were able to take advantage of the adults' prompting questions. Moreover, although the 5 children with SLI scored lower than those in the control group, they were able to use a variety of temporal-aspectual forms presupposed by the discourse context. As Figure 1 exhibits, imperfective aorist and imperfective perfect seemed to be more difficult for the SLI subjects, so that they did not manage to respond properly to prompting utterances containing these verb forms. Pluperfect proved to be less successful as a contextual clue - it was neglected by all SLI subjects and by 4 out of the 5 control subjects as well. The combination perfective imperfect, as it was mentioned earlier, could not be used in an elicitation task, that is why it was only formally included in the graphic presentation.

Figure 2: Total number of SAME vs. DIFFERENT transitions scored by each of the children with SLI

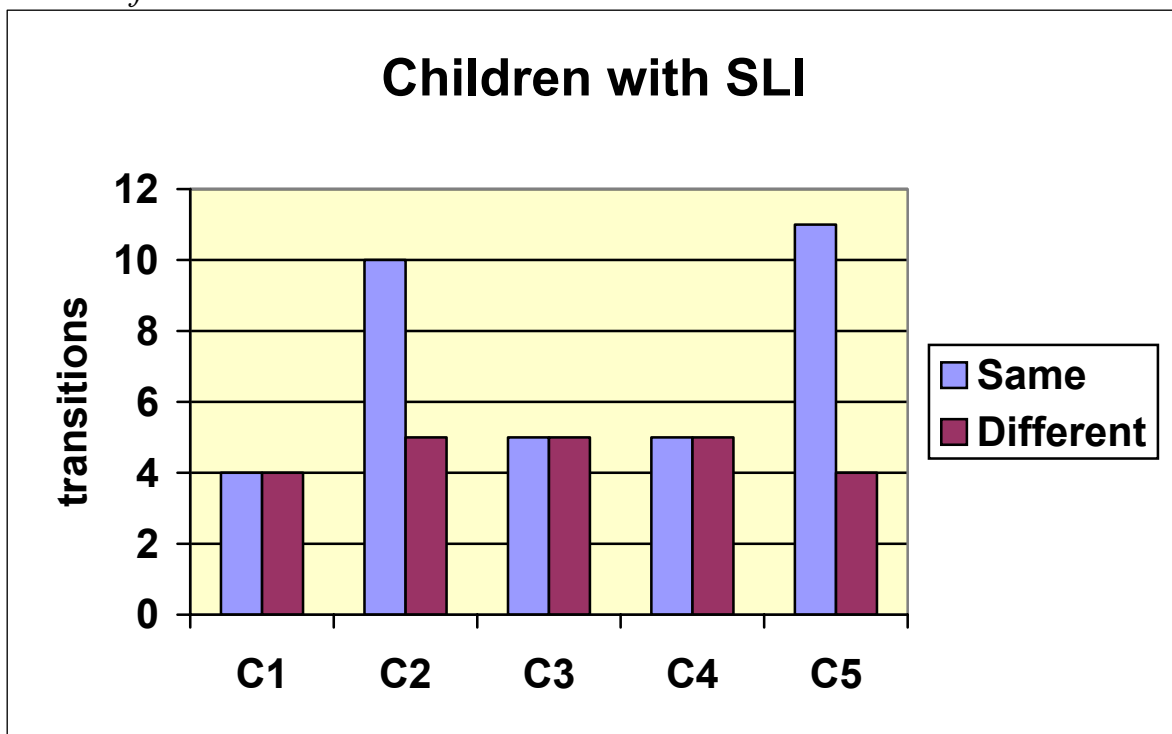
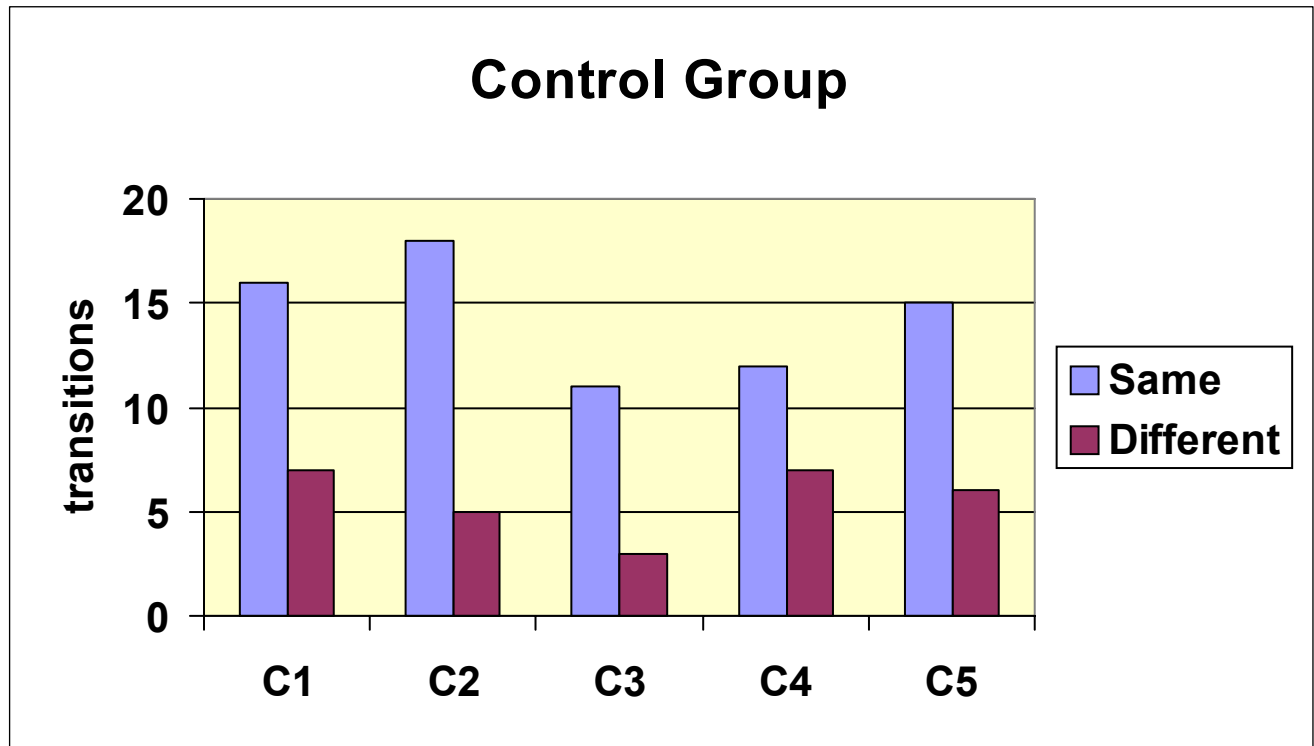


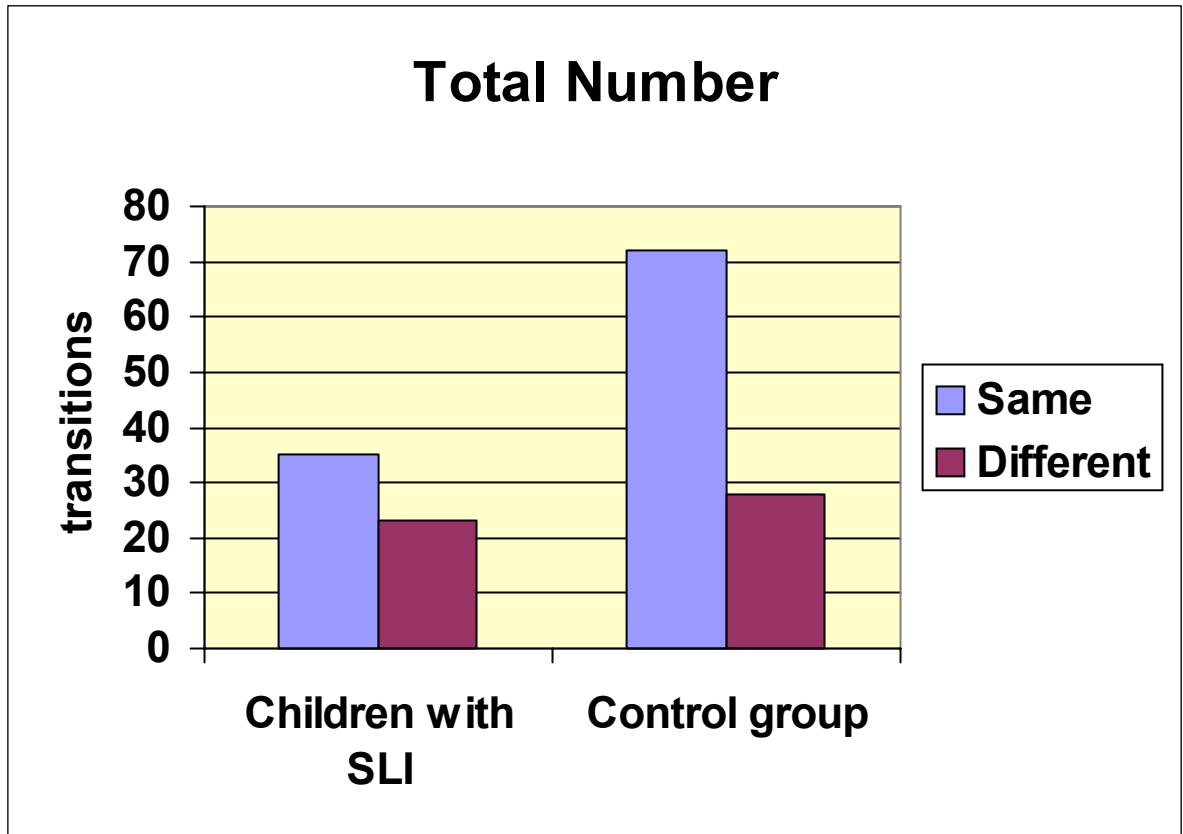
Figure 3: Total number of SAME vs. DIFFERENT transitions scored by each of the children in the control group.



The individual scoring for each of the SLI children and the children from the control group can be seen in Figure 2 and Figure 3 respectively.

The comparison between the total number of SAME/DIFFERENT transitions given by the two groups is illustrated in Figure 3. The results demonstrate that the performance of the control group differs from the one of the SLI children at the expense of the SAME transitions, whereas the DIFFERENT transitions are almost equal for the two groups.

Figure 4: Total number of *SAME* vs. *DIFFERENT* transitions given by the children with *SLI* and the control group.



In order to decide whether the between-group differences reach statistical significance, the relative percentage of *SAME*/*ALL* and *DIFFERENT*/*ALL* for all of the subjects was counted (cf. Table 3).

Table 3: *Relative percentage of SAME/ALL and DIFFERENT/ALL for the children with SLI and by the control group*

Children with SLI					Control group					
	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
Same	4	10	5	5	11	16	18	11	12	15
Differ	4	5	5	5	4	7	5	3	7	6
All	8	15	10	10	15	23	23	14	19	21
Same/All	50,0%	66,7%	50,0%	50,0%	73,3%	69,6%	78,3%	78,6%	63,2%	71,4%
Diff/All	50,0%	33,3%	50,0%	50,0%	26,7%	30,4%	21,7%	21,4%	36,8%	28,6%

Table 4: *Means and standard deviations for the children with SLI and the control group*

Subjects	Means			Standard deviations		
	Total	SAME	DIFF	Total	SAME	DIFF
Children with SLI	11,6	7 (58,0%)	4,6 (42,0%)	3,2	3,2	0,5
Control Group	20	14,4 (72,2%)	5,6 (27,8%)	3,7	2,9	1,7
Student's t-test	ttest 'same' 0,03963					
	ttest 'different' 0,03963					
	ttest all 0,00516					

The means and the standard deviations obtained for both groups were shown in Table 4: Compared according to the Student's t-criterion, the two groups - children with SLI and the control subjects - differ significantly in their ability to make use of (by $p < 0.05$). The t-test comparison of the SAME transitions, however, did reach statistical significance (by standard limit of deviation 0.005 $p < 0.05$).

Qualitative analysis

Some of the DIFFERENT transitions given by the children did not violate the Bulgarian discourse rules and could be treated as acceptable. In these cases children did not take the point of view the adults offered to them, but instead imposed their own point of view on the situation that had to be verbalized (cf. examples 3 and 4). The ability to answer both with a similar verbal form as well with a different but acceptable one, speaks in favor of a more flexible language development in these children, marking adult-like linguistic performance; it was found (with a single exception, cf. example 5) only within the control group.

(3) E: Kakvo točno **beše napravil** Živko?

What exactly DO-PLUPERFECT-PFV-3rd p.sg Živko?

(What exactly has Živko done?)

C3 (contr): ... Toj me **hvana** otzad I me **vdigna**...

He CATCH-AORIST-PFV-3rd p.sg from behind and LIFT-AORIST-PFV-3rd p.sg. me.

(He caught me from behind and lifted me.)

(4) E: Ja kaži kakvo **se e slučilo**.

Tell (me) what HAPPEN-PERFECT-PFV-refl. 3rd p.sg.

(Tell me what has happened here.)

C4 (contr.): Tuka nie **razkazvame**...

Here we TELL-PRES-IMPF-1st p. pl a story...

(Here we tell a story...)

(5) E: Kakvo **si napravil** dosega?

What DO-PERFECT-PVF-2nd p. sg. till now?

(What have you done till now?)

C3 (SLI): **Napravih** v detskata staja... sega **vzeh**... **ocvetih**...

(I) *DO-AORIST-PFV-1st p.sg. in the children room... now (I)*

TAKE-AORIST-PFV-1st p. sg.... (I) COLOUR-AORIST-PFV-1st p. sg....

(I've made in the children room... I've just taken... I've coloured...)

In (3), the pluperfect form in the experimenter's question received aorist as an answer. This is a possible shift of discourse perspective - both pluperfect and aorist pertain to the same narrative mood, the core of which is represented by aorist. One could object that the child avoided a pluperfect form because of its greater formal and conceptual complexity. The experimenter's invitation is to speak about what 'had happened' provoked the child to refer to the events from the perspective of PAST REFERENCE TIME, thus taking into account not the actions (achievements), but rather the results of them at the past moment of reference. However, the child was eager to describe the dynamic scene which occurred between him and his friend, and this was only possible after shifting the perspective and ignoring the experimenter's prompting pluperfect verb form.

Example (4) is typical of turn-taking during a picture-book-seeing activity: The experimenter and the child are looking at a picture where the painted static scene is a result of previous dynamic events. The experimenter's prompting question is often in a perfective PERFECT, as in (4), whereas the answer can describe the static picture in present tense. The child's answer in (4), however, refers not to the picture itself; with the utterance "Here we tell a story" the child informs his interlocutor that the teacher in the kindergarten repeatedly engage the children a story telling about the same picture.

CONCLUSIONS

Outcome data from our study have shown that both children with SLA and children without developmental problems are sensitive to the linguistic context: they respond to prompting utterances presupposing

certain temporal-aspectual forms with verbs possessing the same temporal-aspectual characteristics.

However, the children with SLA differ significantly from the control subjects: their capability to take advantage of the offered contextual clues is underdeveloped, although they show a general understanding of their collocutors' minds. Whereas the children without developmental problems have the choice, on one hand, to conform to the temporal-aspectual perspective offered in the dialogue, and, on the other hand, to replace it with different, but discursively acceptable temporal-aspectual perspective representing their own point of view, the children with SLI (with a single exception) have not still mastered this adult-like ability of representing the dynamic properties of situations.

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