COMPARING DIFFERENT ASPECTS OF MORPHOSYNTACTIC ABILITIES IN A GROUP OF CHILDREN WITH DEVELOPMENTAL DYSLEXIA

Martina Caccia

Neurocognition, Epistemology and Theoretical Syntax (NETS) Center of research, Institute for Advanced Study IUSS - Pavia, Italy

SLI and Dyslexia are both developmental disorder: the first one affects the acquisition of oral language and it is often characterized in terms of problems with morphosyntax; the second one is a specific impairment in the acquisition of reading and spelling skills despite normal or above-average intelligence. On the one hand, Dyslexia seems to be an increasingly widespread disorder, only in Italy there are 30000 new diagnoses of dyslexia every year (Porciani, 2013). On on the other hand, diagnoses of SLI seem to be less common than Dyslexia (e.g.: in the United States 91% of speech therapists treat phonological/reading disorders, and 60% treat individuals with SLI (American Speech Language Hearing Association, 2008)). However, a study from McArthur et al (2000) cited in Stojanovik and Riddel (2007) argues that 55% of children diagnosed with dyslexia could be classified in the SLI spectrum too and Bishop and Snowling (2004) suggest that the two disorders are supposed to have the same incidence in the population (3-10%). Although there is no doubt that phonological processes are quite compromised in children with Developmental Dyslexia (DD), there is also an evidence that other linguistic areas, such as syntax and morphosyntax, are affected in children with only diagnosis of DD (Guasti, 2013). The purpose of this study is to discuss data on the production and comprehension of a set of particular syntactic agreement configurations and functional items, such as clitics pronouns, by children with developmental dyslexia so as to assess their oral language skills. In order do this, we have administered an agreement test (in two modalities: listening and reading) and a test of production of object clitic. 203 children took part in the experiment. All the children were recruited from three primary schools in the Milan area. Participants were divided into three groups: 1) a control group (CG): 130 third and fourth graders (60 females and 70 males), between 7;1 to 10;1 (M= 8,8; SD= 7,0). 2) A group of children with developmental dyslexia (S)DD (including both children with developmental dyslexia DD and children with 'suspected dyslexia' SD): 29 children, between suspected and diagnosed dyslexia, of third and fourth grade (17 males - 12 females), age range 7;1-10;1 (M=8,8; SD= 7,7). 3) First graders' group (FG): 44 children (21 females and 23 males), between 5;7 - 6;9 (M=6,3; SD= 3,5). In the agreement test 26 sentences have been used, 13 correct and 13 manipulated, through which 5 syntactic agreement configurations were tested: D- N agreement, Subj. - V agreement, V – Subj. agreement, Cl. – PastPart agreement, Subj. - Unacc. PastPart agreement. The test was administered on an individual basis; each child was taken to a quiet room, she/he was seated in front of a puppet -Teddy Bear- next to the experimenter. The task of the test was to help Teddy Bear to learn Italian giving a grammaticality judgement of the sentences that the little bear had said (or written) previously, and providing a correction of the sentence (if it was considered 'wrong'). In the listening mode, the sentences were recorded and children listened to the sentences in random order. After listening to the sentence, each child had to express his grammaticality judgment. If child judged the sentence wrong, she/he had to correct the sentence. In written modality (not administered to FG) Teddy Bear had a sac which contained small pieces of papers with the sentences written on it; each child had to draw a card from the sac and to read aloud the sentence written on it. After reading the sentence, the child had to express his grammaticality judgment and, if the sentence was judged ungrammatical, she/he had to provide the correct sentence. Morphosyntactic and syntactic competence was assessed also through a test of elicited production of 3rd person direct object clitics (Prévost 2012, COST bi-SLI). The test is

implemented as a Power Point presentation to be administered on an individual basis. Each trial consisted of a question-answer task based on pictures. There were 2 warm-up items, 12 test items and 5 fillers. The 12 test items were meant to elicit the production of an object clitic while the 5 fillers target the production of a reflexive clitic. Groups'data analysis showed that Clitic/Past Participle was the most problematic agreement configurations, in particular for (S)DD group (consistent with Moscati e Rizzi 2012). In V/S configuration indefinitive subject was well-identified by all the groups (much more than focused subjects). As far as the grammaticality judgment in listening agreement test (S)DD and CG showed about the same results. Differences between the two groups arose in correcting agreement violation on Cl/Pp: DD systematically omitted the object clitic (but, surprisingly, even in the CG, object clitics' omission was more frequent than expected). As for FG, agreement's violations were less identified than the other two groups (in particular S/V only 50% and Cl/Pp 64%). In reading modality apparently both groups (CG and (S)DD) seemed to show more difficulties than in listening. However, CG's mistakes were due to automatically correction of the violations on D/N and S/V that children did while they were reading, whereas in (S)DD 'automatically correction' was less frequent than in CG, showing (as expected) more difficulties than their peers. The most interesting data was the common tendency to correct sentences with clitic-pp agreement without manipulations (E.g.:After hearing "il ragazzo lo ha raccolto", some children judged the sentence ungrammatical and they corrected it with: "il ragazzo ha raccolto", omitting the object clitic), as it is shown in table 1.
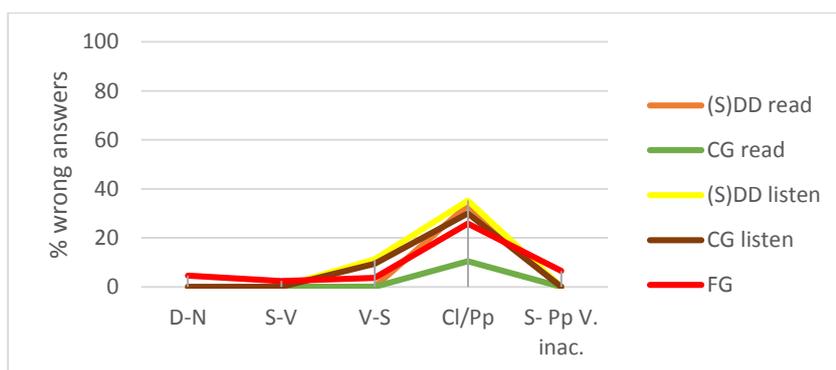

Table 1: percentages of wrong answers given by the three groups after listening/reading correct sentences.

Table 1 shows that even without any manipulations Cl/Pp turn out to be the most problematic configurations, especially for (S)DD. If we consider data on the object clitic production (S)DD group produced less clitics (72,4%) than the other two groups (CG 82,1% and FG 85,6%). In the light of some unexpected data we made an individual analysis of each group. Analysis revealed a subgroup (about 30%) in (S)DD group that tended to omit clitic in agreement test and also to produce just a little (or even not at all) object clitic. Doing the same individual analysis for CG and FG, it emerged that in both groups there was a subgroup of children that showed more difficulty than their peers. Production of clitic is a clinical marker of SLI in Italian and in other Romance languages at the age of 5 and, as data shows, it can persist beyond 5 years. This study showed that even children with developmental dyslexia, in third and fourth school-grade, can show severe problems in the production of clitics. This study shows that a fine-grained linguistic analysis can be really useful to identify possible cases of atypical development: both agreement and object clitic assessments indicate that the presence of morphosyntactic difficulties expressed in terms of Cl/Pp agreement and in object clitic production. Even though a deeper scrutiny of the results is needed, these data might well indicate that some child in the normal control group presents a latent SLI syndrome that can not be diagnosed using conventional tests.