Verb movement in Hebrew-speaking Children with G-SLI

Children with Specific Language Impairment (SLI) show significant limitations in various language abilities. In recent years, research has indicated that the SLI label relates to a heterogeneous group, within which a sub-group, grammatical SLI (G-SLI), can be defined that shows a significant deficit in syntax (van der Lely, 1997; Bishop et al., 2000; van der Lely & Christian, 2000). Children with G-SLI show deficits in comprehension and production of sentences, mainly complex sentences that include Wh- and NP-movement (such as passives, relative clauses, topicalization structures and Wh questions).

Previous findings showed that Hebrew speaking G-SLI children have difficulties in the comprehension of sentences with movement of noun phrases (Novogrodsky & Friedmann, 2002). These findings were consistent across paradigms: production, reading comprehension, listening comprehension and repetition. An interesting question that has not been studied until now is the status of verb movement in G-SLI, and whether verb movement is impaired like movement of noun phrases. Verb movement has been found to be impaired in agrammatic aphasia (Friedmann, 2002) and to be acquired late in normal language acquisition (Zuckerman, 2001; Novogrodsky & Friedmann, 2002). We tested verb movement in Hebrew using Triggered Inversion sentences in which the verb moves to the second position of the sentence, immediately after a non-subject phrasal constituent (Shlonsky, 1997, Shlonsky & Doron 1992). This movement creates an XVSO structure such as (1). According to Shlonsky and Doron (1992) and Shlonsky (1997), the XVSO structure in Hebrew is created by a non-subject constituent at spec-CP, which triggers the movement of the verb to C^0. Borer (1995) has a different analysis for this structure. According to her, the verb moves only up to I^0 and the first constituent is in spec-IP.

(1) etmol axla ha-yalda xumus.
yesterday ate the-girl hummus
'The girl ate hummus yesterday.'

The participants were ten Hebrew-speaking school age G-SLI children and ten younger controls. Verb movement was tested using three paradigms: sentence repetition, aural sentence comprehension and written sentence comprehension. Sentence repetition compared repetition of simple sentences with and without Triggered Inversion (XSVO vs. XVSO sentences). The aural comprehension tested the sentences that included a verb in the second sentential position (before the subject) and a verb-noun homophone (such as *tikra* - which can be either the noun *ceiling* or the verb *will-read*) which was located after the subject (2).

The participants were asked to paraphrase the sentence. The written sentence comprehension tested the comprehension of sentences that included a verb moved to the second sentential position after the subject and a verb-noun homograph (such as עלה - *ale*, leaf or *ala*, climbed) which was located after the subject (3). The participants were asked to read the sentence aloud and choose the matching picture between two pictures: one that matched the verb reading and one that matched the noun reading of the homograph, in the case of sentence (3) it was a leaf and someone climbing the stairs. The idea behind using the ambiguous words after the subject was that if the children can link the verb to its initial position, they will now that the word after the subject must be the object. If, however, they cannot link the verb to the post-subject position, they will choose to read or understand the ambiguous word as the main verb.

(2) maxar ticba ha-isha **tikra** ba-moadon
tomorrow will-paint the-woman **ceiling**/ will-read in-the-club

(3) etmol maca ha-yeled **ale** ba-madregot
yesterday found the-boy **leaf**/climbed in-the-stairs

The results showed a marked impairment in the production of verb movement: even 15-years-old children with G-SLI showed an inability to repeat XVSO sentences, while they could repeat the parallel XSVO sentences, as well as longer sentences. In addition, a surprising dissociation was found between good performance in the written and aural comprehension tasks and the poor performance on the repetition task.

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