The acquisition of scrambling in Malayalam

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The acquisition of scrambling has received considerable attention, especially in the last decade, but there is no study so far of child Malayalam. Here we report the first study of scrambling in Malayalam, in order to compare two competing views in the literature: (i) parameter setting is early and there is no delay in A' movement (Wexler 1998, 2004) and (ii) A' movement is limited in child grammar by more strict intervention effects than adult grammar (Friedmann, Belletti & Rizzi 2009). Under the view in (i) scrambling is predicted to be acquired by the two word stage; under that in (ii) it is predicted to be a late acquisition under certain circumstances (when intervention effects are operative). Malayalam is an SOV language (1a) that allows for departures from this basic word order following informational constraints (Jayaseelan 2001): SVO is possible with a right-dislocated O (1b), OSV (1c) with a topicalised O and a focused S and OVS (1d) with a focused O:

(1)   a.   Aniyathi   chechiye   thallunnu.
             younger sister-NOM elder sister-ACC   push-ing
             'The younger sister is pushing the elder sister'.

       b.   Acan   puthappikkunnu aniyane.
             father-NOM   cover-ing   younger brother-ACC
             'The father is covering the younger brother.'

       c.   Muthashiye   aniyathi   thodunnu.
             grandmother-ACC younger sister-NOM   touch-ing
             'The younger sister is touching the grandmother'

       d.   Cettane   eduthirikkunnu acan.
             elder brother-ACC   lift-ing   father
             'The father is carrying the elder brother'

As a preliminary to our study of child Malayalam, we examined the productions of adult speakers to quantify the presence of the various word orders in adult speech. We collected spontaneous data from the media and from print media reporting spoken dialogues, and based our analysis on 1000 utterances (having excluded sentences with subject/object drop and passives). The results appear in Table 1. Assuming then that these word orders are attested in the input children get, we designed an experiment to test the comprehension of the sentence types exemplified in (1). A total of 60 children, in the age range of 3;2 to 5;3 years, plus 20 adults controls, were included in the experiment. Subjects were tested on 24 sentences, 6 per sentence type. The verbs used were transitive, agentive verbs, and all sentences were reversible and unambiguous, due to the overt morphological marking of Malayalam. The task was a four-picture-matching task. The results appear in Table 2 (adults, not included in the table, performed at ceiling). The statistical analysis indicates that, taking all children together, responses for the various word orders are all above chance. Regarding age, there are statistically significant differences between 3 and 5 year-olds (Estimate of the difference -1.164, $p<.0001$) and 4 and 5 year olds (Estimate of the difference -1.36, $p<.0001$), but, looking at sentence type for each age group, responses are all above chance except for OSV for 4 year-olds (CI(95%) = (0.42, 0.63)) and OVS for 3 year-olds (CI(95%) = (0.47, 0.68)). So, based on a conservative calculation (the task is a *four*-picture selection task), with these two exceptions, our results show understanding of canonical and scrambled word order. Since our experiment does not provide sentences with a context rendering the scrambled orders entirely felicitous, and pragmatic appropriateness is known to have an effect on performance (Otsu 1992), we could expect the results to improve in a new experimental design. Intervention effects do not appear to degrade the comprehension of OSV/OVS when compared to SOV/SVO. Above chance performance is achieved much earlier than ages 7 and

8, when narrow intervention effects are claimed to remain operative. This supports hypothesis (i) rather than (ii).

SOV	OSV	OVS	SVO
0.49 (491/1000)	0.22 (222/1000)	0.17 (172/1000)	0.11 (115/1000)

Table 1: Percentage of SOV/OSV/OVS/SVO in adult production

	3-year-olds	4-year-olds	5-year-olds
SOV	0.69 (0.23)	0.73 (0.23)	0.87 (0.30)
SVO	0.72 (0.23)	0.63 (0.22)	0.91 (0.33)
OSV	0.72 (0.23)	0.53 (0.21)	0.79 (0.25)
OVS	0.58 (0.21)	0.64 (0.22)	0.88 (0.30)

Table 2: Results for the comprehension of SOV/SVO/OSV/OVS (Standard error in parenthesis)

References

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