Comprehension of wh- questions in infants exposed to Palestinian Arabic

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There is a large body of work on the acquisition of long-distance dependencies, but much less is known about these dependencies in preverbal infants. We address this issue with new results from an eye-tracking study on wh- comprehension in Palestinian Arabic. For lack of research in other languages, our work builds on the studies conducted in English by Seidl et al. (2003), Perkins and Lidz (2020, 2021), a.o. We tested infants with a mean age of 18.2 months (age range: 17–19 months; N = 16, after excluding all infants for whom signal detection was below 55%) and an adult control group. We investigated the comprehension of wh- questions headed by ?ay 'which' (in sentences like ?ay ?arnab besayye\ le\fractions\ a:n? 'Which rabbit PSEUDO-VERBs the horse?' and ?ay dub leħs? a:n bemraʃ-u? 'Which bear does the horse PSEUDOVERB?, all questions with wh- movement). The use of pseudo-verbs aimed to guarantee that infants have no access to the argumental structure of the verb, as argued for younger infants by Perkins and Lidz (2020), and cannot comprehend the question based on lexical knowledge. We measured looking time at a character and not a whole event to ensure that gaze was as expected if the question was comprehended, in a departure from standard measures. The results appear in Figure 1 for the four windows in which looking time was measured (corresponding to the baseline in which participants heard 'What is happening?', and three presentations of the experimental sentence). The statistical analysis indicates that infants looked at the target character in the first presentation of the subject wh- question; in all other windows, their performance was not different from chance. This constitutes evidence for comprehension of subject wh- questions at 18.2 months, with no correlation between comprehension and vocabulary size or age within the range tested.