ACQUIRING SEMITIC VERB MORPHOLOGY IN DIFFERENT SOCIO-ECONOMIC CONTEXTS: A STUDY IN HEBREW-SPEAKING CHILDREN

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The development of Semitic verb morphology has long challenged the psycholinguistic literature, given the derivational, semi-productive nature of the root and *binyan* verb-pattern system. Verbs are lexical entities, with typical verb-related meanings (Kibrik, 2012), but in Hebrew their morphological components make important contributions to their forms and meanings (Berman, 1985). The major structural device, organizing the Hebrew verb lexicon, is the non-linear affixation of two sub-lexical morphological primes - the Semitic *root* and the *binyan* (literally ‘building’) pattern, two complementary morphemes, which intertwine to make up the Hebrew verb stem. The nature of root structure and meaning, *binyan* forms and semantico-syntactic functions, and the composition of derivational verb families, based on a single root shared by verbs with different *binyan* patterns -- are all critical for lexical and morphological acquisition in Hebrew and other Semitic languages. Developmental accounts of Hebrew verb learning should be based on empirical data regarding the type and token corpus distributions of root, root categories, and *binyan* structures and functions, so as to explain the emergence and consolidation of the verb categories we observe in adult language. One critical question regards how children learn to extract root and pattern regularities from the ambient language, given the prevalence of basic *Qal* verbs with defective (irregular) roots, which render early input and child speech highly opaque. Another question concerns the structure and composition of derivational verb families, which organize the Hebrew verb lexicon and enable new-verb derivation (Ashkenazi et al., 2016; Levie et al., in progress; Ravid et al., 2016).

The current study examined these questions in Hebrew-speaking children aged 4-6 in the perspective of socio-economic (SES) background, which is known to affect language development, especially impeding lexical learning (Rowe et al., 2012), and was related to the amount and diversity of talk children experience from early on (Hoff, 2013) and to literacy practices at home (Hart & Risley, 2003). Preliterate development is especially meaningful in this context, as it foreshadows growing language and literacy discrepancies in the coming school years (Levie et al., 2017). While most studies on early lexical and morphological acquisition in different SES contexts to date examine children’s language interactions with their parents, the current study examines a corpus of spontaneous conversations among peer speakers. This method offers a unique window on language development, as children in peer interaction do not receive elaborative adult feedback that facilitates linguistic communication. Materials consisted of transcribed and coded recordings of peer talk produced by 36 monolingual, typically developing Hebrew-speaking preschoolers aged 4-5 and 5-6 years, from two different SES backgrounds. The basic unit of the study was a 30-minute recording of a triad of same-age and same-SES children in spontaneous play. Triads were selected for the study as the smallest group allowing children diverse opportunities for talk that could be captured on tape. Each age group consisted of six such triads, that is, 18 children per age group, half of them from mid-high SES background, and half from low SES. Analysis focused on verbs and their derivational morphology components: roots, *binyan* patterns, and verb families. Findings revealed consistent differences between the two SES corpora in terms of lexical and morphological richness. The high SES corpus had about twice as many word tokens, verb tokens, verb lemmas, and root types than the low SES corpus. In other words, they produced more verb talk and had a more diverse verb lexicon than the children from low SES. In terms of development, new lemma and verb token counts increased with age in both groups, but they did more steeply so in the high SES group, indicating a higher rate of lexical learning. The analysis of verb morphemes too showed more lexical density and diversity in the high SES group. On the one hand, both groups produced more defective (irregular) root tokens and more
full (regular) root types, but on the other, regular roots were much more prevalent in the high SES corpus in both types and tokens. This means that the verb lexicon of the high SES participants contained more lower-frequency, lexically specific and literate verbs based on regular roots. Finally, both SES groups had similar frequencies of basic Qal and highly transitive Hif’il and Pi’el, but the high SES group had more low-frequency Nif’al and Hitpa’el in both types and tokens, which have been linked to literate, higher-register language. Derivational families, a specific feature of the Semitic verb lexicon, were similarly indicative of SES differences. For both SES, over 80% of roots occurred in singleton verbs, that is, verbs with no verb derivational family - a property of the early Hebrew lexicon. However, the high SES group had twice as many verb singletons than the low SES, indicating a disadvantage of low SES children, since singleton verbs make the main contribution to growth in the pre-literate verb lexicon. In both SES groups, the remainder of the roots derived mostly two-binyan families, expressing basic transitivity modulations such as basic-inchoative, basic-causative, and inchoative-causative contrasts. Yet again, the high SES group had structurally and semantically more variegated singleton- and two-binyan- verb lexicons, with a more complex binyan composition.

In sum, the current study offers a unique perspective on lexical disadvantage in low SES preschoolers, taking into account the typologically relevant properties of Hebrew derivational morphology. In line with extensive literature in non-Semitic languages, the current study of preschoolers’ peer conversations found a smaller, sparser, less diversified and less specific verb lexicon in children from low SES, with shallower developmental curves indicating a lesser ability to incorporate new verbs in acquisition. Our novel contribution is typologically specific, couching these findings in terms of frequency differences in Semitic morphology - structural root types, binyan distributions, and derivational family composition.

References
Levie, R., Ashkenazi, O., Ben Zadok, G., Eitan, S., Raz, E., & Ravid, D. (in progress). The Hebrew verb route: derivation components in acquisition and development