

The acquisition of Semitic morphology in Hebrew and Arabic: Developmental cross-modal analyses of corpora

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The acquisitional path of Semitic morphology has challenged researchers ever since the publication of McCarthy's 1981 paper on nonconcatenative morphology. Semitic morphology is synthetic / fusional, and can be characterized as 'rich' in several senses, with implications for acquisition (Ravid, 2003, 2012; Saiegh-Haddad, 2018). First, it encodes many semantic notions, both inflectional and derivational - in word-internal format. For example, a Hebrew verb such as *hidlakt* 'you, Fm lit' encodes the notions of lighting (root d-l-k), transitivity (verb pattern Hif'il), past tense (pattern vowels and suffix -t), second person, singular, feminine (suffix -t). Children growing up in morphology-oriented languages learn to seek meaning within the word. Second, Semitic morphology is rich in the systemic sense, as it uses at least two major structural systems to encode these notions: (1) the nonlinear (nonconcatenative) root and pattern device - e.g. Arabic *kasar* 'broke', *inkasar* 'broke (intransitive)', *kassar* 'broke, Tr into pieces'; and (2) the linear (concatenative) device (e.g. Arabic *busta:n* 'garden' / *busta:n-ji* 'gardener', Hebrew *iton* 'journal' / *iton-ay* 'journalist'). Children acquiring Semitic languages learn to think about their morphology in terms of a systematic, complex apparatus and to use morphological structures as pointers to word category and possible meaning. And finally, Semitic morphology involves many morpho-phonological changes within the word and the root. For example, under morphological operations, Hebrew noun stems undergo systematic changes such as vowel deletion or change, and stop / spirant alternation, as in *iparon* / *efron-ot* 'pencil / pencil-s'. Children growing up in a language where morphemes keep changing form, yet systematically retain the same meaning, learn to look for patterns of complex meaning / structure relationships.

Despite their common ancestry, Hebrew and Arabic differ along several dimensions, including inflectional and derivational systems. One example that comes to mind is the structure of noun plurals. Hebrew and Arabic also differ in the distance between the spoken and written versions of the language, which in Arabic takes the extreme form of diglossia, namely the existence of a spoken vernacular of Arabic as the language of everyday informal speech alongside Modern Standard Arabic. The linguistic distance between the two varieties of Arabic is evident in all areas of structure and usage, including lexicon, phonology, morphology and syntax, and this distance has been shown to impact language representation and processing in native Arabic speaking children and adolescents (Saiegh-Haddad & Spolsky, 2014).

In the last decade, new spoken and written corpora have been recorded, transcribed, coded and analyzed at Tel-Aviv and Bar-Ilan universities in Israel, yielding new insights on morphological structures and notions typical of Modern Israeli Hebrew, Palestinian Arabic, and Modern Standard Arabic in children, adolescents and adults. The proposed symposium includes 12 papers (two introductory papers and 10 studies) presenting new research focusing on the acquisition and development of Semitic morphology. For Hebrew, we present spoken corpora of approximately 500,000 words, including dyadic mother-child conversations and peer talk from age 2 to 12 years produced by native speakers from high and low socio-economic status. These analyses reveal developmental patterns of usage of verb inflection and derivation (roots, binyan patterns, temporal categories, and subject-verb agreement), as well as the acquisition of prepositions and their pronominal inflections. For Arabic, we present two corpora of approximately 50,000 words, consisting of spoken and written texts produced by native-speaking children and adolescents with typical and atypical development, as well as adults. These analyses reveal developmental patterns of usage of verb and noun inflection and derivation, focusing on roots, patterns and case marking, as

well as the interface of verbs and prepositions. The Arabic analyses underscore the notion of linguistic distance between spoken and written words and morphemes, as well as the role that distance has in morphological awareness.

In both corpora, morphological acquisition is shown to be facilitated by word and morpheme frequency, type frequency and salience of categories and systems, and is mediated by cognitive factors such as language impairment, socio-economic background, and the communicative setting of the discourse.

References

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