Phonological Constraints on Morphological Development: The Acquisition of Hebrew Verb Inflectional Suffixes

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Abstract
This paper studies the effect of phonological development on the acquisition of Hebrew verb inflectional suffixes, comparing between two monolingual typically developing children (SR and RM). Examination of the order at which the suffixes appeared in the children’s speech reveals one distinction; SR produced the number (plural) suffix -im before the person (1st singular) suffix -ti, while RM produced these suffixes in the opposite order. All other suffixes were produced in the same order. As these suffixes differ in the presence vs. absence of a coda, I attribute the distinction between the children to the development of word final codas, which was faster in SR’s speech than in RM’s. This interaction between phonology and morphology is known as prosodic licensing, whereby the prosodic structure hosting a grammatical morpheme is a prerequisite for the production of this morpheme.

Keywords
language acquisition; phonology-morphology interface; verb inflection; word final codas; prosodic licensing; (a-)synchronization; variation; Hebrew

1. Introduction

Morpho-syntactic theories predict that person suffixes (1st) will appear after gender (feminine) and number (plural) suffixes (Shlonsky 1989, Harley and Ritter 2002, Armon-Lotem 2006). However, this is not always the case.

\[^\text{1}\) An earlier version of this paper was presented in BAALL’s First Conference on Afroasiatic Grammar (Paris, 2010). I would like to thank the participants of this conference as well as the two anonymous reviewers, whose comments contributed to improving the present version of the paper. This study is part of the Child Language Project conducted in collaboration with Galit Adam and supported by ISF grant #544/04. The usual disclaimers apply.\]
In this paper I consider the interaction of the morpho-syntactic predictions with phonological development in Hebrew, in particular the development of word final codas. I argue that children follow the order of acquisition predicted by the morpho-syntax only if their phonological development allows them to do so. I thus view the morpho-syntactic predictions as violable guidelines. Note that Hebrew morphology is relatively rich, and thus serves as a good opportunity to explore possible phonological/prosodic constraints on morphological development.

The data presented in this paper are drawn from a longitudinal study of two monolingual typically developing Hebrew-acquiring children, RM (girl) and SR (boy). A quantitative examination of the data shows that SR followed the morpho-syntactic predictions, producing the gender (feminine -a) and number (plural -im) suffixes before the person suffix (1st person -ti). RM produced the gender suffixes (feminine -a and -i) before the number suffix, as predicted by one of the syntactic theories. However, she produced the person suffix before the number suffix.

I argue that RM’s deviation from the morpho-syntactic guidelines is due to phonological effects, in particular the development of word final codas. This phenomenon fits within the prosodic licensing principle (Lleó 2003, Demuth 2007 and references therein), according to which the prosodic structure hosting a grammatical morpheme is a prerequisite for the production of this morpheme. In each pair of suffixes, -ti vs. -im and -a/-i vs. -im, the codaless suffix appears in RM’s speech before the codaful one. This phonological effect is also seen in the order of the acquisition of the three feminine suffixes, where both children produced the codaless suffixes -i and -a before the codaful suffix -et.

The fact that RM produced -ti before -im while SR produced -im before -ti is explained in terms of (a-)synchronization between the phonological and morphological development. Examination of the development of codas reveals that both children started producing the codaful suffix -im at the stage in which they had about 90% faithful codas in their production of nouns. SR started producing inflectional suffixes at this point, and his phonology thus allowed him to produce the codaful suffix. RM, on the other hand, started producing the inflectional suffixes before she reached 90% faithful codas. Thus, while waiting for her phonological grammar to be adequate for the production of a codaful suffix (plural -im), she produced the next in line codaless suffix (1st person -ti).

Note that I am using the term “produce” rather than “acquired”, since the empirical basis of the present study is drawn from the children’s productions rather than from experiments assessing their knowledge of the morpho-syntactic categories.

I start with background information regarding the relevant details on Hebrew verb inflectional suffixes (§2), the morpho-syntactic predictions (§3), and the