

## Acquiring morphological causativity in Hebrew: evidence from mother-toddler interaction

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### Abstract

The concept of causation underlies the ability to understand the motivations for and outcomes of events in the world (Kulikov, 2011). Causativity is a linguistic valency-increasing operation (Tubino Blanco, 2019) whereby an agent causes a change in the action or state of a causee, e.g., *he'exil* 'make eat / feed' and *rikex* 'make soft / soften' respectively. Studying how causativity is learned can shed light on the process of gaining command of transitivity relations (Family & Allen, 2015; Muentener & Lakusta, 2011).

Causativity is expressed in different languages by various lexical, morphological, or syntactic means (Croft, 2012). The current study investigates the acquisition of *morphological* causativity (Nakipoglu, Uzundag & Sarigul, 2021) in Hebrew, which makes use of the two high-transitivity *binyan* patterns *Hif'il* and *Pi'el* (Berman, 1993; Ravid, 2019). Hebrews-speaking children need to experience root-related morphological networks expressing higher- and lower-transitivity verbs with their associated argument structures (e.g., basic *gadal* 'grow up' / causative *higdil* 'enlarge' / and causative *gidel* 'raise') so as to learn how to express morphological causativity. However, *Hif'il* and *Pi'el* verbs are not always causative or even highly transitive (e.g., *hirkish* 'feel'). Therefore, information about the type and token frequency of *Hif'il* and *Pi'el* verbs children encounter, and their degree of coherent causative semantics is of the utmost importance to understanding this acquisition process.

The current study identified all *Hif'il* and *Pi'el* verb tokens in a 600K word corpus of dense recordings of natural interactions of two Hebrew-speaking toddlers and their parents for a period of 1 year and four months between the ages 1;8-2;11 (Ashkenazi, 2015). Each verb token was ranked for degree of transitivity on a scale from non-transitive (e.g., *hicli'ax* 'succeed'), through transitive (*hexezik* 'hold') to causative (e.g., *kicer* 'shorten').

Results showed that parents produced a stable amount of causative verbs across the study period, whereas children's productions increased over time. CDS causativity scale levels predicted CS levels in both *binyan* patterns, showing that children rely on their parents' input in learning to express morphological causativity. Children progressed from item-specific, chaotic use of causativity levels to stable, systematic usage. *Hif'il* verbs were more frequent and more causative than *Pi'el* in both CDS and CS, pointing at *Hif'il* as the main instrument used by children to learn morphological causativity in Hebrew.