Prosodic Licensing, Elaboration of Segmental Structure and Child CH

Consonant Harmony (CH) across major place features is extensively discussed in the literature on child language (see e.g. Smith 1973, Vihman 1978, Levelt 1994, Goad 1997, Rose 2000, Pater & Werle 2001, 2003, Fikkert, Levelt, & van de Weijer 2002). This is partly because this process is common in child language and similar processes are rarely attested in adult languages. Thus, the study of CH is at the center of much acquisition research as it addresses the questions of whether children’s grammars are formally different from those of adults. There are, however, more questions than answers concerning child CH. Disagreements range from whether or not this process is grammar driven to what exactly in children’s grammars drives the process.

In this work, I focus on regressive CH as it is more commonly attested in child languages. By introducing a new set of data from a monolingual English acquiring girl, Julia, I argue that child CH is grammar driven. I propose that the prosodic licensing principle combined with the constraints on the segmental structures that children can build at different developmental stages induces child CH. On one hand, I follow Rose (2000) and Goad (2001, 2003) in arguing that it is the prosodic licensing principle that drives child CH: prosodic heads cannot be featurally less complex than their dependents. On the other hand, I follow Rice & Avery (1995) in regarding early phonological representations as underspecified. I propose that children’s segmental structures are elaborated through stages (see Fikkert & Levelt 2006 for a different view). Specifically, I argue that children’s segmental structure is initially minimal; structure is added at each stage, following the hypothesis of minimality and monotonicity proposed by Rice (1996).

For children who are acquiring a language with a three-way place contrast among labial, coronal and dorsal, I argue that there are three stages that children go through. At stage 1, children have only a two-way place contrast between labial and non-labial (placeless) as in (1), similar to the two-way place contrast observed in Hawaiian. Regressive CH is not usually attested, as most of the tokens children produce at this stage are core syllables or reduplicates.

At stage 2, two learning paths are possible. For children taking learning path 1, a three-way place contrast among labial, coronal and placeless is set up as in (2a), similar to the place contrast observed in Yakut. CH is triggered when prosodic heads are featurally less complex than their dependents; thus, coronal harmony targeting foot-initial placeless segments and labial harmony targeting foot-initial coronal and placeless segments are predicted to apply in children’s systems of this type, as observed in Julia’s outputs (this work). For other children taking learning path 2, a three-way place contrast among labial, dorsal and placeless is established as in (2b), similar to the place contrast observed in Korean. CH is applied to satisfy the prosodic licensing principle: thus, labial harmony targeting foot-initial placeless segments and dorsal harmony targeting foot-initial labial and placeless segments are predicted to apply in children’s systems of this type. This holds of Daniel’s outputs (Menn 1971).

At stage 3, a three-way place contrast among labial, coronal and dorsal is set up as in (3), similar to the major place contrast in English-type languages. CH is triggered by the prosodic licensing principle. Labial and dorsal harmony both targeting foot-initial coronals are predicted to apply, as is attested in Amahl’s grammar (Smith 1973).

Patterns of CH change when the child leaves stage 2 and enters into stage 3, as observed in Trevor’s outputs (Pater & Werle 2001, 2003, Compton & Streeter 1977). Trevor takes learning path 2 at stage 2. Dorsal harmony targeting foot-initial labials attested at stage 2 ceases to apply when Trevor enters into stage 3, conforming to the prediction of the proposal.

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