

## L1 acquisition of polarity sensitivity: The case of “either” and “too”

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**Summary** We present an experimental investigation of how children acquire the polarity sensitivity of the negative polarity item (NPI) *either* and its positive polarity item (PPI) counterpart *too*. We observe a) that children from age 3 to age 5 exhibit a weak but stable inkling of the contrasting licensing requirements for both items and b) that at age 6 the licensing conditions for the NPI *either* are categorically known whereas those for its PPI counterpart remain only weakly exhibited. This adds to the growing body of results suggesting that NPIs are easier to acquire than PPIs but also sharpens the challenge to identify what it is that 6-year-olds “all of a sudden” have figured out about the NPI *either* and that the 3 to 5-year-olds are somehow missing.

**Background** Polarity sensitivity presents a particularly difficult challenge to the child learner, who must discern not only which items in the language they are acquiring are polarity-sensitive but also what the licensing conditions of these items are. Existing work on acquisition of polarity sensitivity suggests that children become adult-like in their understanding and use of some NPIs i) very early, around two years of age, and ii) before PPIs, which are still used and understood in a non-adult way at age 5 (see, e.g., van der Wal 1996, Xiang et al. 2006, Tieu 2009, 2013, Lin et al. 2015). This is surprising on theories of polarity sensitivity where NPIhood and PPIhood are two sides of the same coin (e.g., Szabolcsi 2004, Chierchia 2006, 2013, Nicolae 2012). The claim that children master NPIs before PPIs has primarily been made based on corpus studies of children acquiring English and Dutch. Existing experimental work (e.g., Xiang et al. 2006) has focused on the NPI/PPI pair *any/some*, which involves several complications: the free-choice use of *any*, the difference in polarity sensitivity between accented and deaccented *some* (Giannakidou 2011), and the special scope-taking properties of indefinites.

**Current project** Here, we examine children’s command of the NPI *either* and its positive counterpart *too*. In the adult grammar, *either* and *too* are in complementary distribution (with the possible exception of wide scope readings of *too*; see e.g. Rullmann 2003), as illustrated in (1).

1. a. Sam is eating cake. Sam is eating ice cream **too/\*either**.
- b. Sam isn’t eating cake. Sam isn’t eating ice cream **?\*too/either**.

**Design** We presented 46 children aged 3 to 6 years with a comparative felicity judgement task (cf. Chierchia et al. 2001, Foppolo et al. 2012). Participants were presented with a scene, of which two puppets gave true descriptions differing only in which additive particle (*either* vs. *too*) was used; the participants were then asked which puppet “said it better”. Half of the 8 target items were negative (i.e., environments where adults would select *either*) and half were positive (i.e., environments where adults would select *too*). Examples of positive and negative trial materials are given in Fig. 1 and Fig. 2. Four fillers were used to ensure that children understood the task.

**Results** (Fig. 3) show that 3-5-year-olds, unlike adults, accept both *either* and *too* in both positive and negative environments. However, these children exhibit a non-categorical preference for *either* in negative environments and for *too* in positive environments; that is, they exhibit preferences in the direction of the adult grammar. 6-year-olds continue this pattern in negative environments, but not in positive ones; in positive sentences, 6-year-olds, like adults, accept *too* but not *either*. A linear mixed effects logit model of responses with fixed effects of polarity (*pos/neg*) and age (3-5/6-y.o.) and random effect of subject shows a significant interaction of age and polarity: 6-year-olds were significantly less likely to accept *either* overall (because they do not accept *either* in positive sentences) but significantly more likely to accept *either* in negative sentences. Thus, children appear to acquire full adult-like command of the licensing conditions for the NPI *either* (between 5 and 6 y.o.) before they do so for *too*. Notably this is later than they acquire other NPIs as discussed in the literature. The behavior of 6-year-olds in negative sentences might reflect an ability to access a wide scope reading for *too*; an investigation of whether this ability is also part of the adult grammar is currently underway.

Figure 1: A positive target item

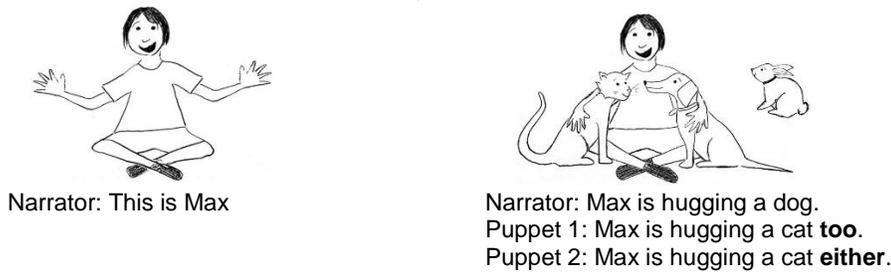


Figure 2: A negative target item

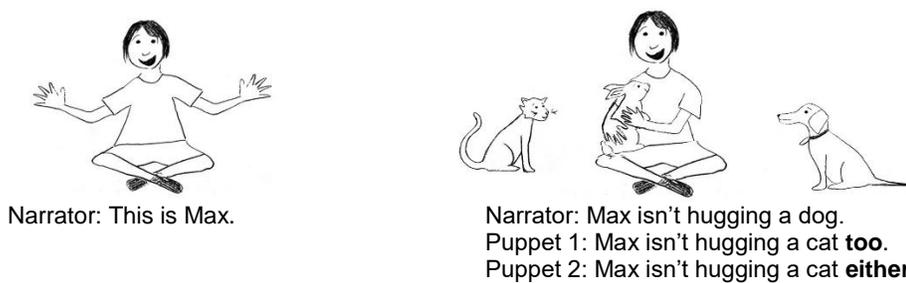
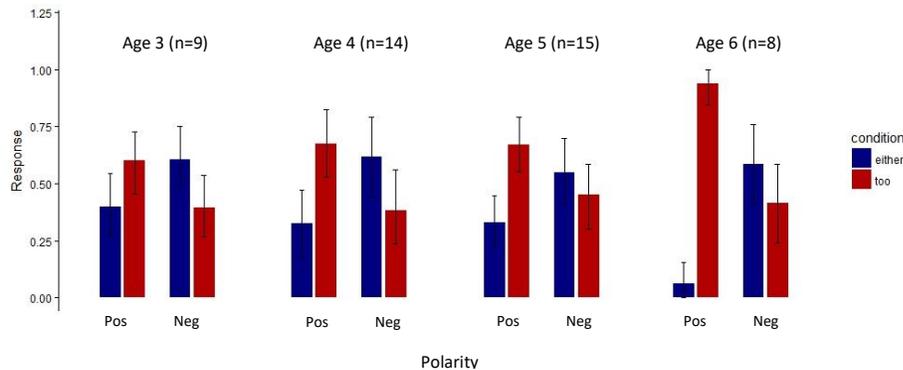


Figure 3: Results (mean acceptance rate of either/too by environment, for each age group)



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