Limitation of linking rules: why are some verbs learned earlier than others?

Innate linking rules between structure and meaning has been argued to help children acquire verbs (Pinker 1984, Berwick, 1985, a.o), e.g., children as young as 21-month old interpret the subject of a novel verb as the agent, and the object as the patient (Gertner, Fisher, & Eisengart, 2006). The innate-linking-rule hypothesis predicts that verbs that are congruent with the linking rules should be easier to learn than verbs that are not. This prediction is challenged by some empirical evidence (Bowerman, 1990). Later work also points out that even patterns that appear to be consistent with the perdition may have alternative explanations (Hartshorne, Pogue & Snedeker, 2015). In this paper, we investigate whether the order in which verb are learned are consistent with the innate-linking-hypothesis beyond frequency. We study three groups of verbs which have crossed linking patterns w.r.t. verb-class size and cognitive salience: frighten/fear-type, chase/flee-type and give/receive-type.

Children (3-6yo) were tested on verbs from one of the three groups. Each dataset was analyzed with a mixed model. Controlling for frequency, *frighten*-type verbs were learned earlier than *fear*-type (p<.001); *flee*-type was learned faster than *chase*-type (p<.01); and *receive*-type showed an initial advantage, which switched to *give*-type at ~4-5yo (verb type X age interaction: p<.001). Among the three studies, the frighten/fear-type results are potentially compatible with the innate-linking hypothesis while chase/flee-type and give/receive-type are both in conflict with it. Critically, these results cannot be accounted for by verb-class size or cognitive salience. We discuss potential theoretical implications.

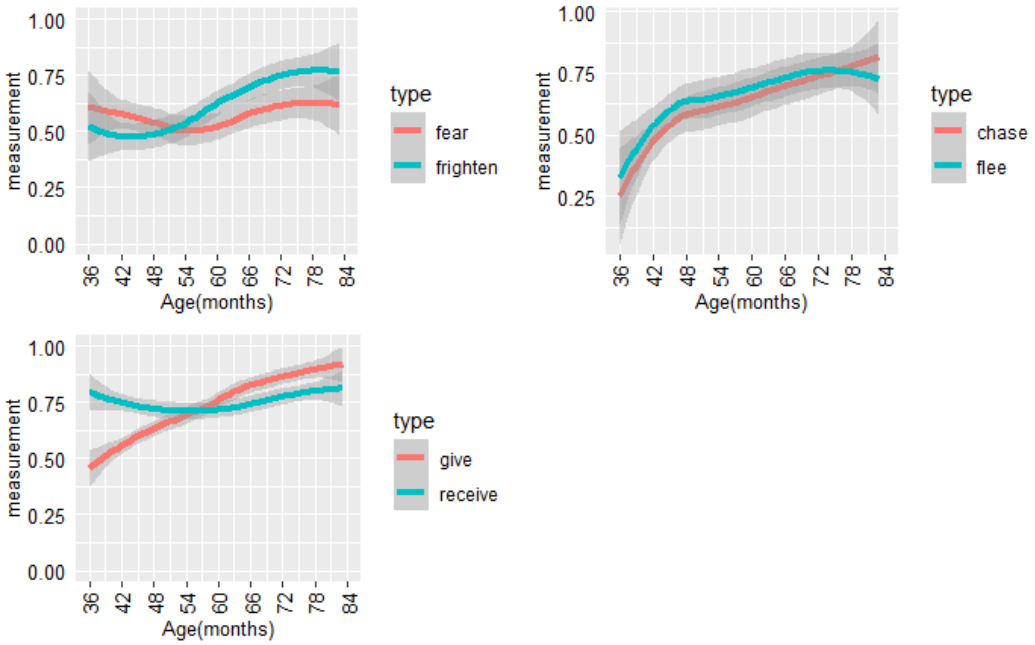

Fig 1 Change of performance by age and verb type **NOTE:** these figures do not control for frequency, which differed systematically across verb types (Table 2).

(245 words)