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### **The Kid's Kid's Bike: Generics in the Acquisition of Recursive Possessives**

This contribution provides experimental evidence that children can comprehend strings of interdependent referential possessives (RPs) and generic possessives (GPs) (e.g., *Bill's kid's kid's bike* where *kid's bike* is a type-denoting GP), implicating GPs in the acquisition of recursion.

**Background:** 's marks semantically distinct RP and GP relations (Munn 1995; Willemse 2007). GPs are modificational and limited to NPs (Fig. 1), with meanings like generic compounds; RPs are referential and full DPs (Fig. 2) (Munn 1995). Studies of recursive possessives have focused on RP recursion and have shown that 3-4-year-olds misinterpret 2-level recursive possessives (e.g., via conjunctive readings) and 6-year-olds (who have 2-level recursion) struggle to comprehend 3-level recursive possessives (Gentile 2003; Limbach & Adone 2010; Roeper 2011, 2013; Pérez-Leroux et al. 2012; Merx 2016; Terunuma et al. 2017).

**Aim:** Why the acquisition gap between 2- and 3-level recursive possessives? The 3rd-level should be guaranteed by 2-level possessive-recursion, given the phrase-structure of indirect recursion (Roeper 2011). If children can generate GPs that obstruct 2-level possessive-recursion, then recursion wouldn't be guaranteed until the 3rd-level. This experiment tests children's comprehension of (recursive) RPs with GP possessums. The prediction is that 4-6-year-olds will comprehend 2- and 3-Poss constructions with GP possessums, as the former are non-recursive (Fig. 3) and the latter involve only 2-level recursion.

**Participants:** 23 English-speaking children (age range: 4;3-10;10, mean age: 4;9).

**Procedure:** Children meet Bill, his kid, Joe, and his kid, each of whom owns one kid-type and one grownup-type bike. All four characters are displayed at once beside their bikes (Fig. 4), creating ambiguity between recursive ([RP [RP]]) and non-recursive ([RP GP]) readings of *Bill's kid's bike*, and enabling unambiguous reference for 3-Poss, 2-level recursive phrases like *Joe's kid's kid's bike*. Following 8 picture-choice controls for lone RPs and GPs, there are 8 truth-value judgment (TVJ) items where the experimenter points to bikes in Figure 4 and (in)accurately refers to them with 2- and 3-Poss constructions containing GP possessums (Table 1), maintaining equal prosodic boundaries between possessives. This routine is repeated with Bill's/Joe's babies and shoes.

**Results:** As predicted, children young enough to misinterpret recursive possessives demonstrate comprehension of 2- and 3-Poss structures with GP possessums: 4-6-year-olds' TVJs were 79.33% accurate and 7-10-year-olds' were 94.38% accurate (Table 2), with 57.14% of errors coming from one question-type (Item 5 in Table 1), where those in err extended possessive relations to the source-possessors/original-owner of the indicated objects. Additionally, 69.23% of Children  $\leq 6$  had generic, non-recursive readings for ambiguous 2-Poss cases, while only 30% of children  $\geq 7$  read them non-recursively (Table 1 and 2).

**Account:** Younger children had more generic interpretations and 4-6-year-olds comprehended 2- and 3-Poss phrases with GPs because [RP GP] syntax is non-recursive. Children may start with a bias for generic semantics (Gelman 2005) and/or get GP syntax first, as all languages have NP modifiers, while RPs entail DPs, which carry definite reference and project articles that are not available in all languages.

Figure 1

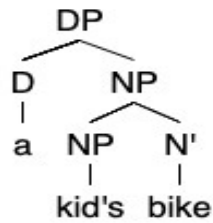


Figure 2

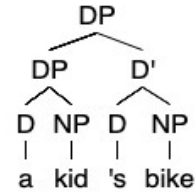


Figure 4

\*numbers and initials were not present in experiment

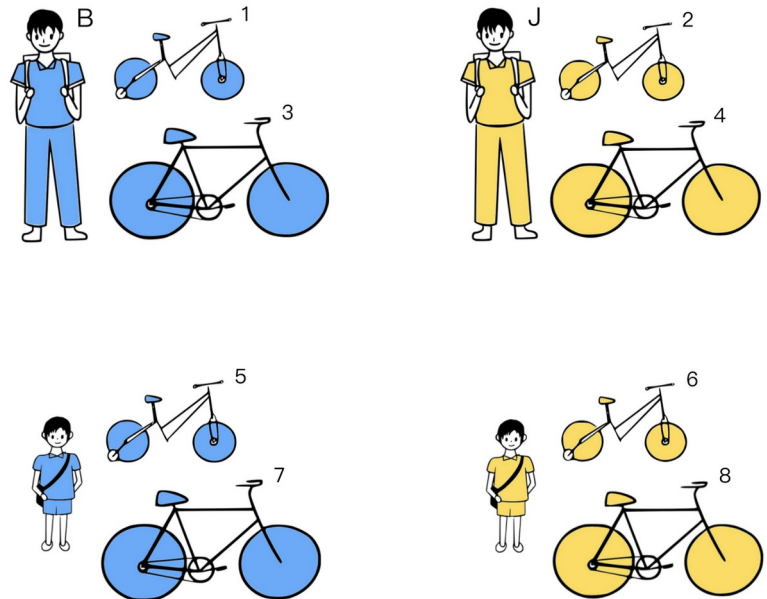


Figure 3

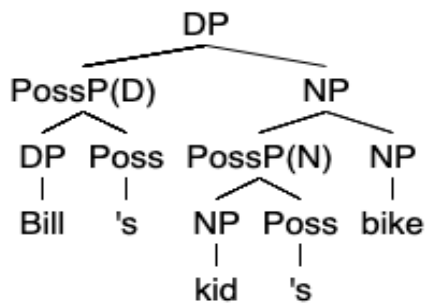


Table 1: Example TVJ Items

TVJ Item Number (16 items total)	Indicated Object (see Fig. 4)	TVJ Question (accurate response)
Item 1: ambiguous 2-Poss	Bike 1	<i>Is this Bill's kid's bike?</i> (yes/no)
Item 3: unambiguous 3-Poss	Bike 6	<i>Is this Joe's kid's kid's bike?</i> (yes)
Item 5: unambiguous 2-Poss	Bike 7	<i>Is this Bill's grownup's bike?</i> (no)

Table 2: Results

	≤ 6-year-olds (n = 13)	≥ 7-year-olds (n = 10)
Mean TVJ accuracy (number of accurate responses/16 items total)	79.33%	94.38%
Standard deviation	0.1259	0.0519
Item 1 (see Table 1) non-recursive generic interpretations	9 (69.23%)	3 (30.00%)