

## A Meaning-First Approach to denominal verbs in child language: Compression is hard

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Denominal verbs represent an interesting case of compression of meaning: the denominal verb can be taken to express the combination of a light verb and a noun/nominal root (Hale & Keyser 2002), i.e., *to shelve* as ‘to put on a shelf’. Using a noun verbally involves mapping one single word to multiple meanings, which may prove challenging for children. Given that an important component of the denominal meaning is implicit rather than explicit, denominals are interesting to explore from the perspective of the *Meaning First Approach* (Sauerland & Alexiadou 2020). According to this theoretical approach, language starts off with conceptual structures, which are compressed before being externalized in the actual linguistic input. While adults prefer compressing conceptual structures, children seem to opt for a one-to-one correspondence between concepts and exponents. Martin, Nie, Alexiadou & Guasti (2022), for instance, conducted a corpus study on causatives in child French and found out that, unlike adults, French children express the implicit causative component of transitive verbs through the verb *faire*. 10% of their uses of *faire* until age 4; 6 are of the type *va faire le couper* (‘go CAUSE it cut’) “going to cut it” (Marilyn, 2;9, Lyon).

Unlike Martin, Nie, Alexiadou & Guasti (2022), who looked at meaning compression from a production perspective, the current paper investigates the comprehension of denominal verbs in acquisition to see whether, as predicted by the Meaning First Approach, children find it harder to understand compressed meaning than decompressed meaning. In doing so, we employ a paradigm involving semi-artificial denominal (SAD) verbs, i.e., non-existent verbs derived from existing nouns (*to cherry*, *to fox*). Importantly, a semi-nonce paradigm allows us to probe into how children and adults compose linguistic items to create new meanings in the absence of the lexical bias of existing verbs. Denominal verbs involve a canonical (typical) interpretation (Kiparsky 1997). They are understood either literally, as involving interaction with the entity named by the root (e.g., *to eat cherries*, *to catch foxes*), or figuratively, as involving a change of state or a behavior similar to that characterizing the root (e.g., *to become like a cherry*, *to behave like a fox*) (Kiparsky 1997, Kelly 1998). To see whether children have more difficulty with compressed denominals like *to cherry* than with explicit denominal verb paraphrases such as ‘become like a cherry’, we conducted two experiments on Romanian children and adults: in **Experiment 1 (Denominal Task)**, they had to listen to sentences containing a denominal verb, whereas in **Experiment 2 (Explicit Denominal Paraphrase Task)**, they had to listen to sentences containing explicit paraphrases of SAD verbs, spelling out their meaning, like *to become like a cherry*. In both experiments, after hearing a sentence, they had to choose the corresponding picture (depicting either a literal use ‘eat cherries’ or a figurative use ‘become like a cherry’). While children may have problems understanding denominals in Experiment 1, given the inherent ambiguity of denominals (open to so many interpretations), in Experiment 2, where the meaning is more explicit, we expect them to perform more adult-like. **Participants** 57 Romanian monolingual TD children (Age range: 4-6) per experiment. **Procedure** Both experiments used a forced-choice task (a picture-selection task), where participants were exposed to 2 types of contexts (literal and figurative) and had to choose between pictures corresponding to literal/ figurative interpretations (Table 1). **Materials** The task employed 32 sentences containing 8 SAD verbs. For purposes of imageability and familiarity, we opted for 4 verbs derived from inanimate roots (*a cireși* ‘to cherry’, *a lămâi* ‘to lemon’, *a cepui* ‘to onion’, *a dovleci* ‘to pumpkin’) and 4 derived from animate roots (*a vulpi* ‘to fox’, *a pinguini* ‘to penguin’, *a elefanți* ‘to elephant’, *a iepuri* ‘to bunny’). Experiment 2 made the internal meaning of denominals explicit (literal meanings: *eat cherries*, *catch a fox*, figurative meanings: *become like a cherry*, *act like a fox*). **Results** The results show that, when exposed to SAD verbs, children have a literal bias even in figurative contexts (see Figure 1), whereas, when the internal structure of denominals is explicit, children become more sensitive to context (see Figure 2). A logit mixed-effects model reveals a significant interaction between Context, Group and Task ( $p < .001$ ). Children’s performance is, nevertheless, not fully adult-like.

**Table 1. Examples of items for Experiment 1 and Experiment 2**

Context	Example sentences	
	Animate subjects	
	Exp 1	<i>Fata a cireșit pentru că îi era foame.</i> 'The girl cherried because she was hungry'
	Exp 2	<i>Fata a mâncat cireșe pentru că îi era foame.</i> 'The girl ate cherries because she was hungry'
Literal		
	Literal Picture	Figurative Picture
	Inanimate subjects	
	Exp 1	<i>Copacul a cireșit. Ce anotimp minunat!</i> 'The tree cherried. What a lovely season!'
	Exp 2	<i>Copacul a făcut cireșe. Ce anotimp minunat!</i> 'The tree made cherries. What a lovely season!'
Literal		
	Literal Picture	Figurative Picture
Figurative	Exp 1	<i>Maria a cireșit când Ion i-a zis că e frumoasă.</i> 'Mary cherried when John told her she was beautiful.'
	Exp 2	<i>Maria a devenit ca cireșa când Ion i-a zis că e frumoasă.</i> 'Mary became like a cherry when John told her she was beautiful.'
Figurative		
	Literal Picture	Figurative Picture
	Exp 1	<i>Merele au cireșit când a venit toamna.</i> 'The apples cherried when autumn came.'
	Exp 2	<i>Merele au devenit ca cireșa când a venit toamna.</i> 'The apples became like a cherry when autumn came.'
Figurative		
	Literal Picture	Figurative Picture

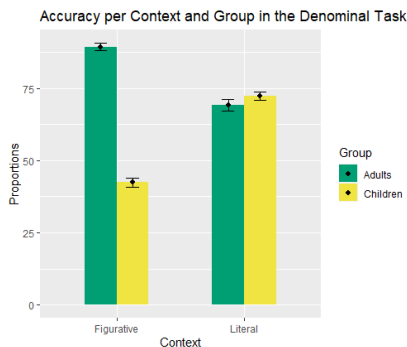


Figure 1. Accuracy in the Denominal Task

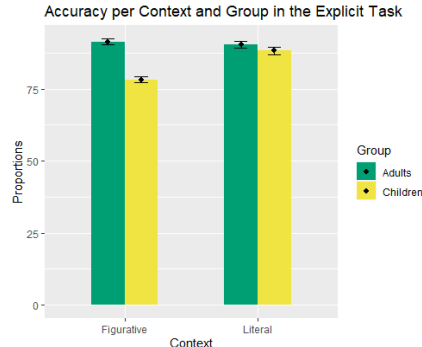


Figure 2. Accuracy in the Denominal Paraphrase Task

**Discussion** When exposed to explicit paraphrases that spell out the internal structure of denominals, children are able to give figurative meanings (*become like a cherry, act like a fox*) in figurative contexts. Thus, children are not cognitively unable to master figurative readings in ‘become/act like N’ paraphrases, a finding supported by cognitive accounts which consider similes different from metaphors (Glucksberg & Keysar 1990, Glucksberg & Haught 2006, Sperber & Wilson 2008, a.o.). Rather, denominal verbs pose problems for interpretation because of meaning compression, ambiguity, indeterminacy, openness to a variety of interpretations. We hypothesize that the lexicon initially contains multiple 1-syntactic structures for denominals (corresponding to both literal and figurative readings). These structures compete, but, at an early stage in acquisition, unlike adults, who abide by *Plausibility in Decompression*, decompressing denominals to the structure that best fits the context, children observe *Simplicity in Decompression*, decompressing denominals to the syntactically and semantically simplest structures, preferring literal over figurative readings : literal readings merge DO-type verbs with Nouns ([V N]<sub>v</sub>), both of which are highly accessible to children, in contrast to figurative readings, which merge BECOME/BEHAVE verbs with roots/n-like meanings ([V Root]<sub>v</sub>) (Kiparsky 1997). Computing n-like root meaning is more challenging, involving identification of possible similarities of the root with various objects. Importantly, we find that spelling out the compressed meaning eases understanding. This supports the prediction made within the Meaning-First Approach that children should find compression harder.