Understanding Sentences with Focus Particles Using Visual Alternatives: Children Do Not Ignore *only*

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1. Introduction

Many sentences require complex mappings of form to meaning that go beyond simple combinations of forms. Compare the sentences in (1) and (2):

(1) Tiger has a red firetruck.

(2) Tiger has only a firetruck.

The meaning of (1) can be calculated by combining the meaning of the constituents: *a red firetruck* is both red and a firetruck and refers to a specific entity in the discourse, *have* involves the assignment of participant roles, in this case a possessor and a possessee. In (2), in contrast, there is no one-to-one mapping between the particle *only* and an element in the discourse. Focus particles such as *only* encode a relationship between the focused constituent (e.g., *firetruck*) and the contextually relevant alternatives (e.g., *bus*, *car*, *plane*, in the context of toy vehicles). Crucially, *only* conveys that the prejacent, i.e., the unmodified statement without *only*, is true and that its alternatives are false (see Rooth 1992). Put differently, (2) presupposes that Tiger has a firetruck and asserts that the set of salient alternatives is empty.

Focus-sensitive operators like *only* can associate with different focus-marked constituents in the sentence, as illustrated in (3a) and (3b), with the focused constituents marked in SMALL CAPS. The focus particle in (3a) is associated with the object; in this case, the set of object alternatives (e.g., *bus*, *car*, *plane*) is empty. The focus particle in (3b) is associated with the subject; here, the set of empty alternatives concerns the subject (e.g., *Koala*, *Panda*). The prejacent in both cases is the same, namely (3c).

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(3) a. Tiger has only a FIRETRUCK. (Pre-object *only*)
b. Only TIGER has a firetruck. (Pre-subject *only*)
c. Tiger has a firetruck. (Prejacent)

To interpret *only*-sentences in a target-like manner, listeners are required to integrate compositionally-derived meaning with contextually available material (Paul et al. 2019). Accordingly, the acquisition task for children is complex and consists of multiple required ingredients, including those listed in (4):

(4) Requirements for target-like interpretation of *only*:
a. Sensitivity to *only*;
b. Identification of the correct focus associate;
c. Ability to evaluate the relevant set of its alternatives;
d. Ability to establish a contrast between the two;
e. Ability to evaluate whether the interpretation matches a given (visual) context.

Acquisition studies show that children's interpretation of *only*-sentences is typically not adult-like until school age, and mastery of pre-object *only* precedes that of pre-subject *only* (Crain et al. 1994, Gualmini et al. 2003, Notley et al. 2009, Müller et al. 2011, Müller et al. 2015, Höhle et al. 2016). Alternative accounts posit difficulties with scope restrictions (e.g., Crain et al. 1994, Notley et al. 2009), focus alignment for the subject (Müller et al. 2011, Müller et al. 2015), representation of the set of alternatives (Paterson et al. 2003), or with evaluating the visual information (Paul et al. 2019, Ohba 2025). Importantly, some accounts propose that children's error patterns arise because they initially disregard *only* and interpret sentences with and without *only* in the same manner (e.g., Paterson et al. 2003, Müller et al. 2015). The current study puts this latter hypothesis to the test using a covered box task (Huang et al. 2013), in a design that disentangles interpretations of sentences with and without *only*.

The remainder of the paper is structured as follows: Section 2 summarizes the main findings of previous acquisition studies of the focus particle *only* and critically discusses the methods used. In Section 3, we present our experimental study, including research questions, methods, and results. Section 4 offers a discussion of the findings and outlines directions for future research.

2. Previous Comprehension Studies on *only*

How children acquire the meaning of *only*-sentences has been the topic of much research since the 1990s (for a summary, see Aravind & Brody, to appear). Crain et al. (1994) developed a sentence-picture verification task, in which participants had to decide whether test sentences such as (5) and (6) matched the picture presented (e.g., Figure 1). Unlike adults, 5-year-old English-speaking children frequently assigned non-target interpretations to sentences containing pre-subject *only*, interpreting sentences with pre-subject *only* (5) and preverbal *only* (6) alike.

(5) Only the cat is holding a flag. (Expected answer: No)

(6) The cat is only holding a flag. (Expected answer: Yes)

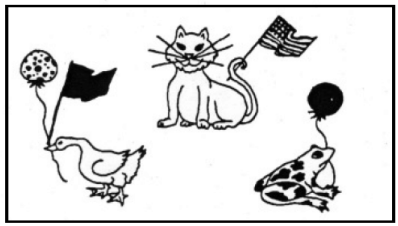

Figure 1: Example test item from Crain et al. (1994) (p. 456, 460).

Crain et al. (1994) suggested that this non-target interpretation was due to a syntactic misanalysis: children treated *only* as a sentential adverb; hence, they assigned the scope of *only* in pre-subject *only*-sentences to the verb phrase instead of to the subject (see also Notley et al. 2009 and Zhou et al. 2009).

However, subsequent findings are incompatible with the syntactic explanation suggested by Crain et al. (1994). Müller et al. (2015) tested German-speaking children's comprehension of the focus particle *nur* ('only') in a series of experiments involving a task similar to the one used by Crain et al. They compared pre-subject *nur*-sentences, with the subject in sentence-initial (7a) or non-sentence-initial position (7b), with pre-object *nur*-sentences (8), against contexts such as those in Figure 2.

(7) a. **Nur** der Elefant hat einen Drachen. (Expected answer for panel A: Yes)
b. Einen Drachen hat **nur** der Elefant (Expected answer for panel A: Yes)
'Only the elephant has a kite'

(8) Die Ente hat **nur** ein Boot. (Expected answer for panel B: No)
'The duck has only a boat'

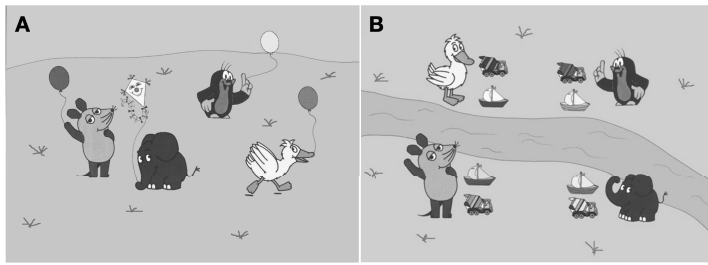

Figure 2: Examples of visual displays in Müller et al. (2011a, 2011b, 2015).

Müller et al. (2015) found that subject-initial *nur*-sentences (7a) and subject-final *nur*-sentences (7b) showed similar difficulties. In (7b), *nur* unambiguously

takes scope over the subject (*Einen Drachen hat* ***nur*** *der* ELEFANT. 'Only the elephant has a kite'). In this case, it is unlikely that *nur* incorrectly takes scope over the whole VP.

Studies on Japanese are in line with the German findings. *Dake* ('only') is a word-internal suffix, and its host can appear sentence-initially, as in canonical sentences, or late in the sentence, as in right dislocation and subject clefts. In all three of these cases, children reportedly have difficulty with subject *dake* ('only') (for a summary of the relevant findings, see Ohba 2025). Müller and colleagues (Müller et al. 2011, Müller et al. 2015, Höhle et al. 2016) propose that children's difficulty with subject-*only* results from problems with focus alignment. The default focus is on the sentence object, but the syntactic position of *only* in the pre-subject *only*-sentences requires focus to be assigned to the subject of the sentence. This results in a conflict between the information-structural default and the focused subject, which children have difficulty resolving. Accordingly, object-*only* sentences, which are consistent with the default focus assignment, are easier for children than subject-*only* sentences, independent of the linear position of the sentence subject.

Both the syntactic misanalysis and focus alignment accounts agree that there is an advantage for pre-object *only* over pre-subject *only*. This asymmetry in child comprehension has been confirmed across a number of languages, including English (Notley et al. 2009, Kim 2011, Sugawara 2016), Mandarin Chinese (Notley at al. 2009), Japanese (Endo 2004), German (Müller et al. 2011), and European Portuguese (Santos 2006), and seems to hold independently of the task.

Hackl et al. (2015) and Sugawara (2016) suggest an alternative pragmatic explanation for the subject-object asymmetry. They argue that *only*-sentences may constitute incongruent answers to the general question "What happened?" that is typically used in the relevant comprehension experiments. According to the requirement of Question Answer Congruence, in the answer to a *wh*-question, the constituent corresponding to the *wh*-phrase should be focus-marked. According to Hackl et al. (2015) and Sugawara (2016), this is compatible with focus on the object as in the case of pre-object *only*, but pre-subject *only*-sentences are incongruent with this question. Thus, children's difficulty would lie in accommodating the type of question that would make an answer congruent with the question. The authors report that when subject *wh*-questions are asked (e.g., *Who is holding a kite?*), children correctly interpret pre-subject *only* over 70% of the time.

According to Paul et al. (2019), children might comprehend *only*-sentences but struggle with the metalinguistic component of the task. In sentence-picture verification and truth value judgment tasks, children are typically shown pictures involving several characters and objects (see, for example, Figures 1 and 2). To make the object-*only* inference, the child must locate the target character and evaluate whether it is holding the mentioned item and whether it is also holding other items, which would violate the truth conditions of the sentence. To make the subject-*only* inference, on the other hand, the child must compare each of the distractor characters' object sets, effectively negating across a larger and more complicated set of alternatives. According to Paul et al. (2019), the more

complicated verification strategy required for subject-*only* sentences in such tasks, along with lower metalinguistic abilities, may explain the observed asymmetry in children's performance with *only*-sentences. Put differently, this account posits that it is the step of evaluating whether the interpretation matches a given visual context (i.e., (4e) above) that is challenging for children.

Ohba's (2025a, 2025b) proposal of Visual Overload follows the same reasoning: children's difficulty with pre-subject *only* stems from the cognitive load of comparing all agent-theme combinations in a visual display. In a modified task in which children were asked to progressively uncover the relevant objects during the presentation of the story, 5-year-old Japanese-speaking children were observed to perform well on both pre-subject and pre-object *only* (Ohba 2025a).

The above-mentioned explanations have in common that they aim at accounting for children's difficulty with pre-subject *only*. Some accounts, however, (additionally) assume that children may initially ignore *only* in both contexts and interpret sentences with and without *only* alike. Paterson et al. (2003), for example, used a multiple-choice picture selection task and found that the predominant response pattern of children aged 4 to 7 years involved accepting the pictures that matched the reading of the sentence without the focus particle. Importantly, there was no difference between sentences containing pre-subject *only* and those containing pre-object *only*.

Using the same task with German-speaking 6-year-olds, Müller et al. (2011a) found the same pattern: 70% of children's picture choices in pre-subject and pre-object *only* trials reflected an interpretation where *only* was not considered. According to Paterson and colleagues (Paterson et al. 2003, Paterson et al. 2006), children's difficulty with *only*-sentences reflects their failure to mentally construct and represent the relevant sets of alternatives associated with *only* and to establish a contrast between the respective set and the focus associate. This can be especially challenging when these sets are not made salient in the prior discourse, and the child instead must infer them indirectly. Accordingly, improved comprehension is expected when the set of alternatives is restricted via the pictures that are presented and need to be evaluated (Paterson et al. 2006) or when the alternatives are verbally introduced prior to the test sentences (Müller et al. 2011b). Indeed, with these changes to the task children performed better with both types of *only*-sentences, although still worse than adults.

Most relevant for the current study are the results from another experiment by Müller et al. (2011a). Using the same pictures as before, they asked 6-year-old German-speaking children in a sentence-picture verification task to judge whether a simple sentence such as (9) matched the picture presented (see Figure 3 for the different visual contexts). The sentence did not contain any focus particle and denoted a proposition that was true in all of the pictured contexts; hence, the sentence could in principle be said to match all pictures shown (A, C, D, and E). While adults accepted the sentence in these pictured contexts 80-100% of the time, children tended to reject the pictures more frequently, with acceptance decreasing from 88% for picture A to 58% for picture D.

(9) The fireman is holding a hose. (Expected answer: Yes)

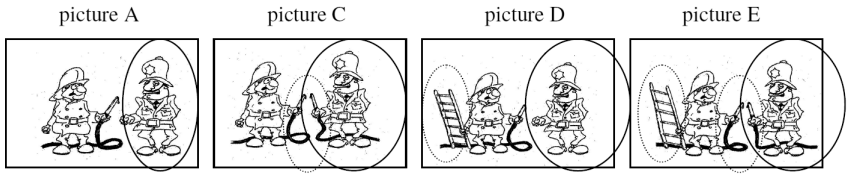

Figure 3: Examples of visual displays in Müller et al. (2011a).

According to the authors, this response pattern shows that children adhere to the maxim of quantity (Grice 1975) to a greater extent than adults. This maxim is violated because the sentence is not as informative as it could be, given the additional character and object(s). In other words, children frequently generate ad-hoc exhaustivity inferences with *only*-less sentences.

This finding could help shed light on how children initially understand *only*-sentences and how they often succeed in giving the correct response, albeit for the wrong reason. The reasoning is as follows. Imagine that the test sentences in fact contained the focus particle *only*, as in (10) and (11), but that the child ignored *only*.

(10) Only the fireman is holding a hose.

(11) The fireman is only holding a hose.

If the child followed the maxim of quantity, she could reject (10) when judged against Pictures C and E, because in these pictures a policeman is holding a hose as well. Likewise, she could reject (11) against pictures D and E, because in these pictures the fireman is also holding something else besides the hose. In other words, the characteristics of the visual display, i.e., the presence and number of non-mentioned characters and the type and number of non-mentioned objects, may mediate the child's responses.

Now let us consider Figure 1 again. Following this reasoning, children could correctly answer *yes* to pre-object *only*-sentences (*The cat is only holding a flag*) without even considering *only*. The *only*-less sentence *The cat is holding a flag* matches the picture, because the cat is shown as holding a flag, and the maxim of quantity is fulfilled because the cat is holding nothing else that is not mentioned in the sentence. With the false pre-subject *only*-sentence (*Only the cat is holding a flag*), this interpretation strategy would backfire, since the *only*-less sentence *The cat is holding a flag* matches the picture. That is, with a visual setup as in Figure 1, children could succeed on the "true" *only*-object trials but fail the "false" *only*-subject trials, but for the wrong reasons.

The same reasoning also applies to the visual setups in Figure 2. The "true" pre-subject *only* trials (*Only the elephant has a kite*) can be answered correctly without considering *only*, because in the picture, the elephant has a kite and nothing else. The "false" pre-object *only* trials (*The duck has only a boat*) can be

correctly rejected, because the duck has a boat but also a truck, which is not mentioned in the sentence, thereby violating the maxim of quantity. In short, in typical sentence-picture verification tasks, children may respond to pre-object *only*-sentences in a target-like way even without considering the focus particle, and they may respond to pre-subject *only*-sentences in a target-like manner, when the correct answer is *yes*. Only pre-subject *only* trials that require a negative answer cannot be answered correctly without consideration of *only*. And, as expected under this explanation, the latter condition is exactly the one where most errors have been observed (e.g., Müller et al. 2011a).

Note that this argument does not imply that children are generally insensitive to focus. Szendröi et al. (2018) tested children on their interpretation of different focal accents (e.g., *The BIRDIE has the bottle, right?* vs. *The birdie has the BOTTLE, right?*) and found evidence that children, like adults, were sensitive to these prosodic manipulations of focal accent in English, French, and German. The point is that the type of sentence-picture verification tasks used in many studies limits what we can conclude about whether children indeed consider *only* in their interpretation of *only*-sentences. It may be that children's good performance on pre-object *only*-sentences reflects their adherence to the maxim of quantity, which is independent of whether one considers the meaning contribution of *only*.

To summarize, most acquisition studies have found earlier mastery of pre-object *only* than of pre-subject *only* across different languages, including English. But previous research does not provide a clear picture as to why many children have difficulty with *only*. Importantly for the present study, offline studies have typically used sentence-picture verification tasks that may have led children to answer correctly, but for the wrong reasons.

3. The Present Study

In the present study we take up this open issue by examining how English-speaking 4- to 6-year-olds comprehend pre-object *only*-sentences, in comparison to sentences without the focus particle. We adapted the covered box task (Huang et al. 2013) using a design that disentangles interpretations of sentences with and without *only*. This would allow us to further probe whether children in fact ignore *only* in pre-object position, thereby interpreting sentences with and without it alike. The inclusion of the *only*-less sentences would also allow us to probe the degree to which children (and adults) follow the maxim of quantity and generate ad-hoc exhaustivity inferences in the absence of *only*.

3.1. Participants

Thirty-three English-speaking children (4;03-6;02 years, *M*=5;03 years) and 36 adults participated in the experiment. Child participants had English as a first language (as reported by their parents) and were attending a primary school in Toronto, Canada. Adult participants were recruited through Prolific

(https://www.prolific.com/) and were self-reported English native speakers residing in Canada or the USA.

3.2. Procedure

Participants completed a covered picture task implemented on Qualtrics. On each trial, participants saw two visible cards on the screen, each containing a cartoon animal holding one or two objects, and a third card covered by a curtain (see Figure 4). A puppet appeared in videos to give clues such as (12) and (13) about which card was hers. The participant's task was to select the card they thought was hers, based on the clues. No response-contingent feedback was given.

(12) Tiger has only a firetruck.

(13) Tiger has a firetruck.

Children were tested in a quiet room in their school, with the experimenter guiding the child through the experiment. Adults completed the experiment online on their own (i.e., with no intervention from the researchers).

3.3. Materials

On target trials, one of the two visible pictures was a distractor, while the other showed the character with the mentioned object plus one other object. We manipulated the presence or absence of *only* within subjects. On *only* target trials, participants were expected to select the covered picture, since in neither of the visible pictures did the character have only the mentioned object and no others (see Figure 4).

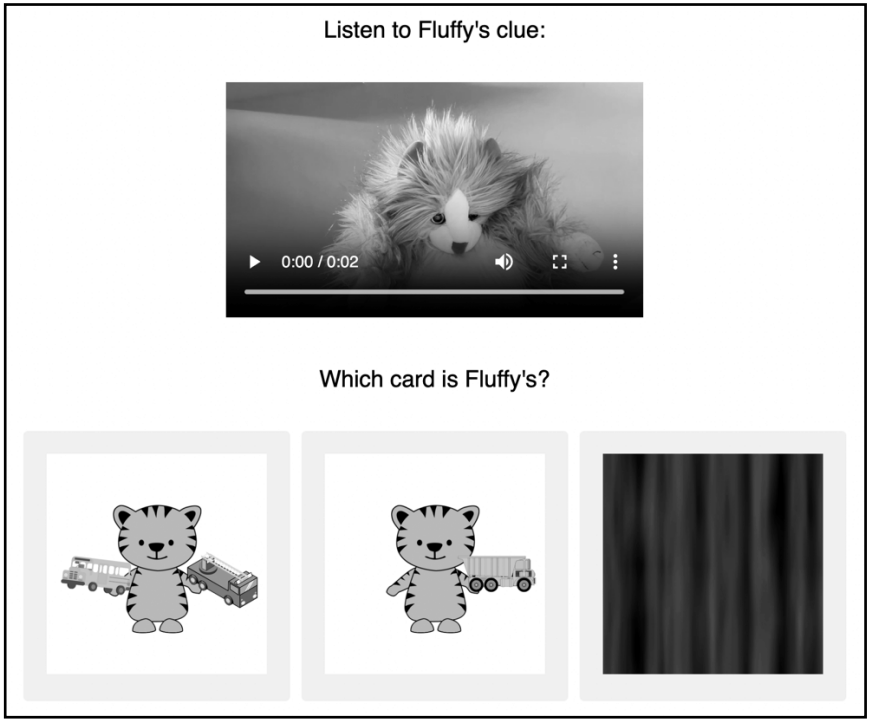

Figure 4: Example visual display accompanying the test sentence *Tiger has (only) a firetruck*. Participants who considered *only* were expected to select the covered picture, since the visible picture in which Tiger has a firetruck also contains another object, making it incompatible with *only*.

On the *only*-less target trials, participants could select either the covered picture if they followed the maxim of quantity and computed an ad-hoc implicature that the character had only the mentioned object, or they could select the visible picture where the character had the mentioned object and something else. More covered picture selections were thus expected for *only* than for *only*-less targets.

Our rationale for having the target response correspond to a hidden image instead of a visible picture consistent with the meaning of *only* was as follows. A child who does not consider *only* in her interpretation would interpret the *only* target as simply: "Tiger has a firetruck". If a picture where Tiger has just a firetruck were visible, the child might not know which of the two pictures with a firetruck to choose from, resulting in chance performance. Alternatively, she might – as in the sentence-picture verification tasks – opt for the correct picture, but for the wrong reason. That is, following the maxim of quantity she would opt for the picture with the one item depicted that is mentioned in the sentence.

Compare this decision process to the one needed in the covered box design. Here, children who ignore *only* will construct a mental representation of Tiger

holding a firetruck and will then need to decide whether to opt for the visible picture, which matches the sentence, or to opt for the unknown picture, which may depict the minimal picture of Tiger with just the firetruck. In contrast, children who are sensitive to the meaning contribution of *only* are required to reject the visible picture where Tiger has two objects and to choose the unknown picture, which we argue is a stronger indication of a target-like interpretation than if the 'minimal' picture were visible.

Participants received two training trials, followed by 10 target trials (five with *only*, five without *only*) and eight controls, in a fully randomized order. The control trials consisted of four *only* and four *only*-less items, half with a visible target, and half with a covered picture target (see Figures 5 and 6). These controls ensured that participants could select both covered and visible pictures as appropriate and allowed us to balance the overall number of visible and covered picture selections.

Figure 5: Example visual stimulus accompanying the control sentence *Koala has (only) a backpack* (visible target). Participants received four such visible controls.

Figure 6: Example visual stimulus accompanying the control sentence *Panda has (only) a phone* (covered picture target). Participants received four such covered picture controls.

3.4. Results

All 33 children and 34 of the 36 adults correctly answered at least three of the four visible picture controls and at least three of the four covered picture controls, and were included in the analysis. Performance on the control trials was above 93% for adults and above 98% for children (see Figure 7).

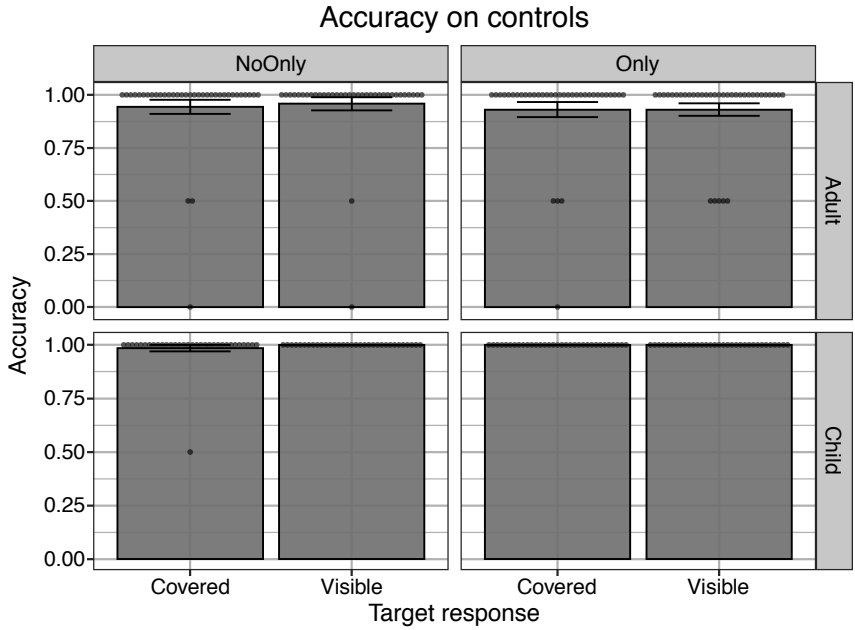

Figure 7: Mean accuracy (%) on visible and covered picture controls.

Performance on the target trials is displayed in Figure 8. Both groups selected the covered picture more in the *only* condition (adults: 86%; children: 83%) than in the *only*-less condition (adults: 16%; children: 15%). Setting aside the few selections of the visible distractor (23/670 responses), we fit a mixed effect logistic regression model to the data with Group, Condition, and their interaction as fixed effects, and random by-participant intercepts. Comparisons of this model with those without each of the fixed effects of interest revealed only a significant effect of Condition ($\chi^2(1)=474$, $p<.001$). Children and adults thus behaved alike, with more covered picture selections for *only*-sentences compared to *only*-less sentences.

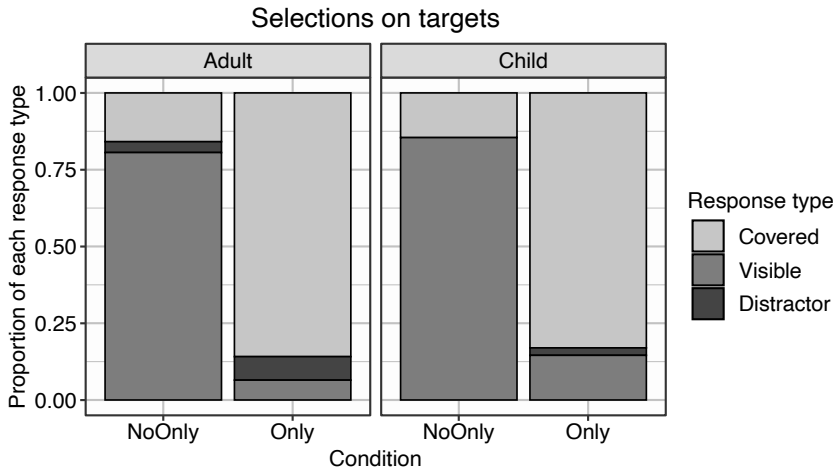

Figure 8: Proportions of visible picture, covered picture, and distractor image selections across conditions and groups.

In terms of the ad-hoc exhaustivity implicature, we observe that for *only*-less sentences, both groups chose the visible picture most of the time (adults: 81%; children: 86%), but there were nonetheless some covered picture selections (adults: 16%; children: 15%) that were in line with the maxim of quantity.

4. Discussion and Conclusion

In the current study, we asked whether children ignore *only* in pre-object position and interpret sentences with and without it alike, and whether children follow the maxim of quantity and generate ad-hoc exhaustivity inferences in the absence of *only*.

Previous studies have typically relied on sentence-picture verification and have reported that children master pre-object *only* before pre-subject *only*. However, some accounts have argued that children's error patterns may arise because they initially disregard *only* and interpret sentences with and without it alike (e.g., Paterson et al. 2003, Müller et al. 2015). As we argue above (see Section 2), the sentence-picture verification paradigm may have led children to arrive at the correct answer without considering the focus particle. Using a new covered box design, we were able to disentangle interpretations of sentences with and without *only*.

The results reveal that 4- to 5-year-old English-speaking children do not ignore *only*. That children were able to select the covered picture alternative where appropriate provides strong evidence that they interpreted pre-object *only* in an adult-like way. Our results do not suggest problems with scope restriction (Crain et al. 1994) or evaluating alternatives (Paterson et al. 2006). Our child participants attended to information in the visual context using the (unmentioned) alternatives in the pictures to successfully interpret *only*.

The other finding of our experiment is that children computed ad-hoc exhaustivity inferences for *only*-less sentences at a rate of 15%. This finding confirms earlier findings by Müller at al. (2011a) that some children entertain 'minimal' interpretations of simple sentences which mimic the meaning of *only* sentences. Therefore, studies testing focus particles should contain *only*-less trials to control for this possibility.

Considering the multiple elements underlying the acquisition task that children face (see (4) in Section 1), our findings suggest that by age 5, English-acquiring children have mastered these various ingredients when it comes to understanding *only* in pre-object position. Recall, however, that object position is the default position for focus. Future research could therefore also target pre-subject *only* using the same covered box paradigm.

References

Aravind, Athulya & Gabor Brody. (To appear). Pragmatic development. In *The Cambridge Companion to Child Syntax*.

Crain, Stephen, Weijia Ni & Laura Conway. (1994). Learning, parsing and modularity. In C. Clifton, L. Frazier & K. Rayner (eds.), *Perspectives on Sentence Processing*, 443-67. Hillsdale, NJ: Lawrence Erlbaum.

Endo, Mika. (2004). Developmental issues on the interpretation of focus particles by Japanese children. In A. Brugos, L. Micciulla & C.E. Smith (eds.), *Proceedings of the 28th Annual Boston University Conference on Language Development*, 141–152. Somerville, MA: Cascadilla Press.

Gualmini, Andrea, Simona Maciukaite & Stephen Crain. (2003). Children's insensitivity to contrastive stress in sentences with ONLY. In S. Arunachalam, E. Kaiser & A. Williams (eds.), *Proceedings of PLC 25*, 87–110. Philadelphia, PA: University of Pennsylvania.

Höhle, Barbara, Tom Fritzsche & Anja Müller. (2016). Children's comprehension of sentences with focus particles and the role of cognitive control: An eye tracking study with German-learning 4-year-olds. *PLoS ONE* 11(3). https://doi.org/10.1371/journal.pone.0149870

Huang, Yi Ting, Elizabeth Spelke & Jesse Snedeker. (2013). What exactly do numbers mean? *Language Learning and Development* 9:2, 105-129. http://dx.doi.org/10.1080/15475441.2012.658731

Kim, Soyoung. (2011). *Focus Particles at Syntactic, Semantic and Pragmatic Interfaces: The Acquisition of Only and Even in English.* PhD Thesis, Honolulu: The University of Hawaii.

Müller, Anja, Barbara Höhle & Petra Schulz. (2015). The interaction of focus particles and information structure in acquisition. In C. Hamann & E. Ruigendijk. (eds.), *Language Acquisition and Development: Proceedings of GALA 2013*, 330–342. Newcastle, UK: Cambridge Scholars Publishing.

Müller, Anja, Petra Schulz & Barbara Höhle. (2011a). Pragmatic children: How German children interpret sentences with and without the focus particle only. In J. Meibauer & M. Steinbach (eds.), *Experimental Pragmatics/Semantics*, 79–100. Amsterdam: Benjamins.

Müller, Anja, Petra Schulz & Barbara Höhle. (2011b). How the understanding of focus particles develops: Evidence from child German. In M. Pirvulescu, M.C. Cuervo, A.T. Pérez-Leroux, J. Steele & N. Strik (eds.), *Selected Proceedings of the 4th Conference on Generative Approaches to Language Acquisition North America (GALANA 2010)*, 163–171. Somerville, MA: Cascadilla Proceedings Project.

Notley, Anna, Peng Zhou, Stephen Crain & Rosalind Thornton. (2009). Children's interpretation of focus expressions in English and Mandarin. *Language Acquisition* 16(4), 240–288. https://doi.org/10.1080/10489220903266669

Ohba, Akari (2025a). Revisiting the difficulty with subject-*dake* 'only' in Japanese: The impact of visual information on children's comprehension. Talk presented at the 17th Generative Approaches to Language Acquisition (GALA) conference, Tours, France. 11-13 September 2025.

Ohba, Akari, Wataru Sugiura & Hiroyuki Shimada. (2025b). "Subject-only" is not always difficult for children: evidence from unaccusative constructions in child Japanese. Talk presented at the 50th Boston University Conference on Language Development. November 2025.

Paul, Pooja, Jayden Ziegler, Elizabeth Chalmers & Jesse Snedeker. (2019). Children and adults successfully comprehend subject-only sentences online. *PLoS ONE* 14(1): e0209670. https://doi.org/10.1371/journal.pone.0209670

Paterson, Kevin B., Simon Paul Liversedge, Caroline Rowland & Ruth Filik. (2003). Children's comprehension of sentences with focus particles. *Cognition* 89, 263–294. https://doi.org/10.1016/S0010-0277(03)00126-4

Paterson Kevin B., Simon Paul Liversedge, Diane White, Ruth Filik & Kristina Jaz. (2006). Children's interpretation of ambiguous focus in sentences with "only." *Language Acquisition,* 13(3): 253–284. https://doi.org/10.1207/s15327817la1303_4

Rooth, Mats (1992). A theory of focus interpretation. *Natural Language Semantics* 1(1), 75–116.

Santos, Ana Lúcia. (2006). Getting in focus: The role of the NSR in children's interpretation of sentences with focused preverbal material. In A. Belletti, E. Bennati, C. Chesi, E. Di Domenico & I. Ferrari. (eds.), *Language Acquisition and Development: Proceedings of GALA 2005*, 487–498. Newcastle, UK: Cambridge Scholars Press.

Sugawara, Ayaka (2016). *The Role of Question-Answer Congruence (QAC) in Child Language and Adult Sentence Processing.* Doctoral dissertation, MIT.

Szendroi, Kriszta, Carline Bernard, Frauke Berger, Judit Gervain & Barbara Höhle (2018). Acquisition of prosodic focus marking by English, French, and German three-, four-, five- and six-year-olds. *Journal of Child Language* 45(1), 219–241. https://doi.org/10.1017/s0305000917000071

Zhou, Peng & Stephen Crain. (2009). Focus in child language: Evidence from the acquisition of Chinese. In J. Crawford, K. Otaki & M. Takahashi (eds.), *Proceedings of the 3rd Conference on Generative Approaches to Language Acquisition North America (GALANA 2008)*, 336–346. Somerville, MA: Cascadilla Proceedings Project.

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