

Not *only* task matters, position *also*
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Operators like *also* and *only* are focus-sensitive operators whose interpretation requires the retrieval of contextual alternatives: to understand (1) “*Also/Only* Lyn came” one needs to refer to other individuals in the contextual domain that did/did not come (in addition to/except from Lyn). There’s a controversy about if and how much the relationship of these particles with their associated focus is “grammaticized” (Partee 1999). Beaver and Clark (2003) proposed that *only* encodes a lexicalized dependency on focus marking while pragmatic factors might modulate the association with focus for other operators. In the acquisition literature, previous works showed that children have problems with focus operator like *only* (Crain et al., 1999; Paterson et al., 2003) and *also* (Hüttner et al., 2004; Bergsma, 2006). More recently, Berger and Höhle (B&H, 2012) argued that children’s poor performance in those studies might be due to the paradigms used (picture selection and Truth-Value-Judgment task) and showed that German children from age 3 are competent with focus particles like *auch* (also) and *nur* (only) if tested with a Reward-paradigm.

Our experiment. In this paper we intend to feed this debate by presenting an experimental study on children’s comprehension of the Italian versions of *also* (*anche*) and *only* (*solo*), modeled after B&H’s Reward-paradigm. Thirty-one pre-school aged children of age 4 (N=16; age range: 4,1-4,11; MA=4,5) and 5 (N=17, age range: 5,0-5,11, MA=5,4) were tested with sentences in which *solo* and *anche* appeared in two positions: sentence initial (*Solo/Anche* x V NP, C1) or in the middle of the sentence, before the direct object (x V *anche/solo* NP, C2; this is the only condition tested by B&H). In this task, children were asked to help a puppet to decide whether some animals deserved a reward or not on the basis of an indirect statement in which *anche/solo* were used. The following example illustrates the task and the conditions:

C1: initial position	C2: middle position
The elephant assigns a job to the zebra and the giraffe: “I’ve seen your dirty dishes out there. To get a reward, each of you have to clean her own dish”. The zebra and the giraffe go behind a curtain to do their job (and the frog peeps behind the curtain to check). When they come back, the elephant says: “The giraffe surely cleaned her dish”. The frog (who saw what happened) adds: “Guess what? <i>Also/Only</i> the zebra cleaned her dish” . Finally, the elephant asks the child: “Who deserves the reward?”	The elephant assigns a job to the lion: “I’ve prepared an apple and a pear to peel out there. To get a reward, you have to peel both”. The lion goes behind a curtain to do his job (and the frog peeps behind the curtain to check). When he comes back, the elephant says: “You’ve surely peeled the apple”. The frog (who saw what happened) adds: “Guess what? He peeled <i>also/only</i> the pear” . Finally, the elephant asks the child: “Does the lion deserve the reward?”

In C1, children had to reward both animals when *also* was used, and to give the reward to one of the animals when *only* was used. In C2, they had to reward the lion when *also* was used, and not to do so when *only* was used. Children were given practice trials prior to testing.

Results. Data were analyzed by means of a logit mixed model performed with R. We found that 4 year old children made significantly more errors than 5 year olds (38% vs. 28%, Estimate=-3.07, Std. Err.=1.29, z=-2.37, p=.017); in general, children made significantly more errors with *also* (40%) than with *only* (28%) (Estimate=-4.99, Std. Err.=.96, z=-5.20, p<.001); also, a significant effect of position (Estimate=-6, Std. Err.=1.01, z=-6, p<.001) and a significant interaction of position and trigger type is found (Estimate=7.6, Std. Err.=1.25, z=6.08, p<.001): independently of age, children made significantly more errors when *also* appeared in initial position (C1) than when it appeared after the predicate (C2).

Fig. 1 plots the results of operators and condition divided by age.

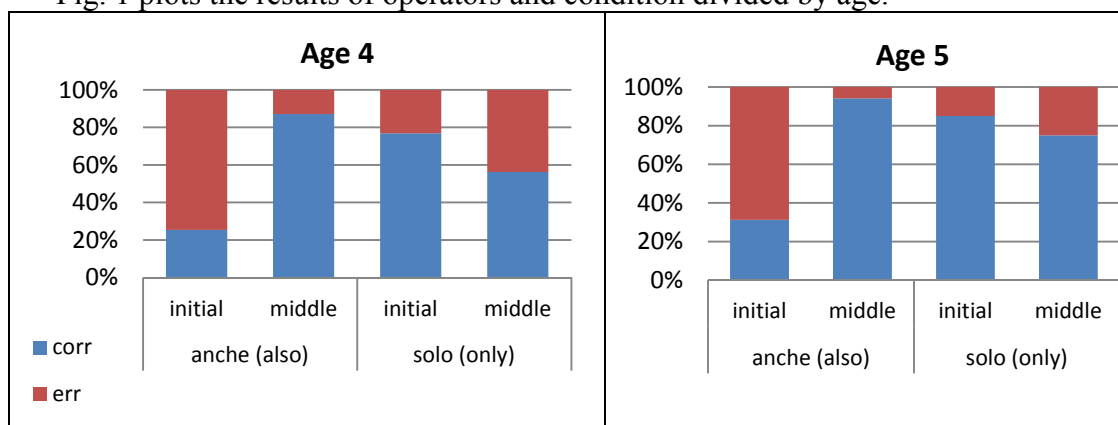


Fig.1

Conclusion. First of all, our results show that the use of a certain paradigm does not suffice to make children competent in all conditions. In our study, we used the same paradigm used by B&H but our children’s performance was less than optimal in some condition, especially when *also* was tested sentence initially. To interpret this result, one should acknowledge the fact that an explanation of children’s poor performance in previous studies cannot rely only on considerations about the type of task used. In light of this, we will take into account the results of previous studies in which a similar difficulty emerged (e.g. Bergsma, 2006), independently of the paradigm used.

Comparing our results to B&H, we also found an age effect and a significant difference between the two particles tested, that was not found in B&H’s study (in which the syntactic position of the focus particles was not varied). The significant contribution of age and type of particle in modeling children’s performance might be accounted for along the lines suggested by Partee (and Beaver & Clark), namely: the association between *also* and its focus alternatives might be more pragmatic, or context-dependent, in nature (and thus more susceptible to age effects), while this association is (more) grammaticized in case of *only*.

Finally, a closer look to our data reveals that the difference between *only* and *also* is tightly linked to the position in which the particle appears. When the particle is sentence-initial (a condition that was missing in B&H) *also* is found to be harder than *only* (less than 30% correct answers, independently of age); when the particle comes after the predicate, *also* becomes the easiest one. One possibility to interpret this result is in terms of processing: the presupposed content of the particle needs to be integrated incrementally; when *also* appears sentence initially, as in “*Also* the zebra...” children need to integrate immediately the presupposed content that someone other than the subject mentioned did something (and incrementally restrict the domain to the individuals that performed the action mentioned). When the sentence starts with *only* instead, the integration of the presupposed content (i.e. that no-one else except than the zebra V) might get more easily integrated because it does not require the identification of a specific individual that did V in the discourse domain, being there none, in fact. When the particle appears after the verb, as in “The lion peeled *also/only* the pear” the incremental accommodation of the presupposed content might be easier in case of *also* because, in this case, the predicate restricts the set of alternatives to “the lion peeled the apple” and “the lion peeled the pear”; in case of *only*, instead, this restriction ends up in the negation of one of the alternatives that has been generated by the focus particle (i.e. the lion did not peeled the apple), something that might be more costly for younger kids to integrate and thus more susceptible to error.

We are currently extending our research to older children in the elementary school testing similar material with a different paradigm. Preliminary findings seem to corroborate the results discussed here.