Scalar diversity of two weak quantifiers in Hebrew (Poster)

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The quantifier *some* can be interpreted logically (to mean 'some and possibly all') or pragmatically (to mean 'some but not all') through the calculation of a scalar implicature (SI). Several studies showed that speakers tend to judge sentences such as 'Some elephants have trunks' as false (using the pragmatic interpretation), although some speakers accept them as true (using the logical interpretation, e.g. Noveck 2001). Like French, Italian and Spanish, Hebrew has two quantifiers equivalent to the English *some*: *xelek* which is necessarily partitive, and *kama*, both have not been tested before. In a series of experiments, we examined the rates of SI calculation with the two quantifiers, comparing them across different experimental manipulations and structures.

Experiment 1 used a between-subjects verification task, where participants had to judge, in the critical trials, whether sentences with one of the 'some-equivalent' quantifiers (*xelek* or *kama*) match pictures where all the items possessed the feature described in the sentence. We compared the rates of rejections (pragmatic responses) for the two quantifiers and showed that participants gave significantly more pragmatic responses for *xelek* (70%) than for *kama* (35%; p<0.001). **Experiment 2** used a between-subjects picture-selection task (similar to Horowitz & Frank, 2015). In critical trials, participants heard sentences with one of the two quantifiers, and had to select one of three pictures (presented simultaneously), in which all, some or none of the objects possessed the trait described in the sentence. We compared the rates of some-picture selection (pragmatic responses) across quantifiers and tasks, and showed that the rate of pragmatic responses was significantly higher in Exp2 compared with Exp1 (*xelek*: 99%, *kama*: 83%), with more pragmatic responses for *xelek* in both experiments (ps<0.001). **Experiment 3** used a verification task similar to Exp1, but added a background manipulation, asking participants to correct a language-learning character by providing a better description to the picture. Here, participants gave significantly more pragmatic responses compared to Exp1 (*xelek*: 100%, *kama*: 99%), and there was a significant quantifier*manipulation interaction (ps<0.008), resulting from the higher improvement in pragmatic responses for *kama*. In **Experiment 4**, we embedded the quantifier *kama* in the partitive construction (which is optional for *kama*, but obligatory for *xelek*). We used the same verification task as in Exp1, and found no effect of the construction, showing similar rates of pragmatic responses for kama in the two experiments (35% and 32%).

Our results confirm scalar diversity, by showing different rates of pragmatic responses for two similar quantifiers, regardless of the construction they appear in. Specifically, *kama*, which does not require partitivity, triggers less such responses. However, certain experimental manipulations (as in Exp 2&3) do increase the rate of pragmatic responses. Thus, it is possible that the alternatives for *kama* are not as salient as for *xelek* and therefore SI calculation is scarce. SI calculation for this quantifier is facilitated when the alternatives are prompted by the experimental context.

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References: Noveck, I. A. (2001). When children are more logical than adults: Experimental investigations of scalar implicature. Cognition, 78(2), 165–188. Horowitz, A. C. & Frank, M. C. (2015). Young children's developing sensitivity to discourse continuity as a cue for inferring reference. Journal of experimental child psychology, 129, 84–97.