Putting donkeys into context

Overview. Recent competing theoretical accounts of donkey sentences rest on claims about what readings are available in different contexts, when different types of determiner are involved. That donkey sentences may be open to more than one reading is widely acknowledged. Specifically, a sentence like (1) may be understood with a so-called Universal (U-) reading, requiring each girl who baked a cake to have iced all of the cakes they baked. Alternatively, it may have an Existential (E-) reading, requiring each girl who baked a cake to have iced some of those cakes.

(1) Every girl who baked a cake iced it.

A long tradition sees this U-/E- ambiguity as related to a similar ambiguity with plural definite descriptions (see [1]). Recent proposals regarding donkey sentences, [2,3], follow distinct proposals for plural definites, [4,5]. [2] follows [4] in setting out a trivalent approach, while [3] follows [5] in explaining U-readings as resulting from a form of (obligatory) scalar strengthening on the quantifier's scope. According to each account, the canonical reading for (1) accounts for U-reading intuitions; but each allows for a mechanism which accommodates E-readings in contexts where, for example, the Question partition locates states as depicted in Fig.1 in the same cell as states that support the U-reading - as per our Forbidden contexts in Exp.1a,b.

The key difference between accounts lies in proposals about quantifiers that have different monotonicity properties. Specifically, based on the fact that SI strengthening tends to not occur in DE contexts, [3] predicts an asymmetry in the availability of U-readings for (1) vs. (2):

(2) No girl who baked a cake iced it.

[2] assumes that U-readings for (2) are in principle available when the QuD locates states as in Fig. 2 in the cell that supports their assumed default E-reading, as in Obligatory contexts below. In addition, according to both [2] and [3], donkey sentences with positive existential determiners, as in (3), should prefer U-readings. However, it has been argued, based on introspection, that such readings are hardly available. Accordingly, [2-3] have proposed separate mechanisms which may explain the apparent lacuna. Finally, these proposals treat singular donkey sentences (as in (1-3)) on a par with plural versions (where the indefinite and pronoun are plural), whilst previously it was argued that singular donkey sentences may not be assimilated to plural, [9]. Experiments 1a,b present sentences like (1-3) in contexts which test these proposals.

(3) More than two girls who baked a cake iced it.

Experiment 1a,b: N=200. Our innovation on recent donkey studies, e.g. [6-8], was to manipulate context – obligatory vs. forbidden. These contexts are illustrated below. For (1) and (3), [2] predicts more False responses to Fig.1 in Obligatory than Forbidden contexts. Regarding (2) and Fig. 2, the target scenario would be assimilated to the same cell as the biased E-reading in the Obligatory context, meaning more False responses for Forbidden than Obligatory. In Exp.1, we manipulated Context and Form (singular, plural) between groups, with Determiner (every, no – Exp.1a; every, more than two – Exp. 1b) within group. We used 4 scenarios (baking/icing cakes; building/painting trains, etc.). Presentation was blocked by scenario with each block introducing a context rule, on which participants were tested on during the course of the block. 3 donkey sentences (T/F/target) + 6 non-donkey filler per block.

Obligatory	**Forbidden**
The teacher told the girls that they can make cupcakes or cookies. ***But cupcakes must be iced for the presentation the next day***	*The teacher told the girls they can make cupcakes or cookies.* ***But cupcakes should not be iced because they need plain cakes for activities the next day****.*

Results:For determiner 'every', analyses demonstrate a clear U/E ambiguity, also clear effects of Context, and Number on Target outcomes. For 'no' we see no such effects. In a follow up replication of Exp.1a allowing participants to express judgements with a Likert scale, rather than a binary

judgement, we found a very small effect of context in the 'no' plural condition. Exp.1b established evidence for a U/E ambiguity for 'more than two' as well as an effect of context. Post-hoc, we observed a difference in rates of U-readings for 'every' when blocked with different determiners ('no' vs. 'more than two') s.t. rate of E-readings is greater in Exp.1b. This 'priming effect' was confirmed in a follow-up study looking at singular donkey sentences only, without context.

Discussion: U- and E-readings for 'every' donkey sentences have previously been shown to be available, [6-8], and this is replicated here. We also show a predicted effect of context. Previous verification tasks have not provided any evidence for U-readings for positive existential quantifiers, but here we find evidence for these with context. While effects of context are demonstrated for both these determiners we find none for 'no'; also, replicating [6,7] we fail to detect any robust U-readings for 'no'. The asymmetry between positive and negative quantifiers in context effects is challenging for [2] and more in line with the pattern assumed in [3]. As for the clear effect of number, with singular versions eliciting more U-readings, and the 'priming' effect of determiners on U-/E-readings for 'every', these are not readily predicted by either account. These outcomes will be taken up in discussion.

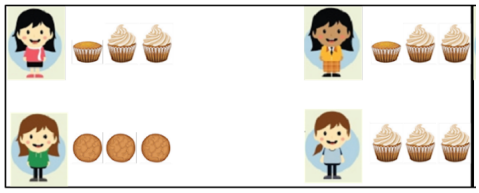

Figure 1: Target condition for *Every*

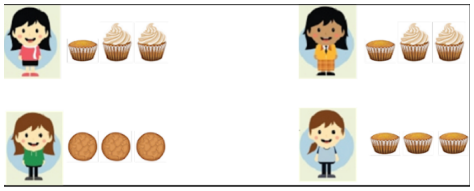

Figure 2: Target condition for *No*

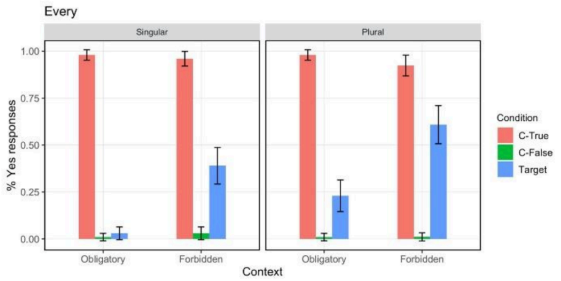

Figure 3: Exeriment 1a rates for *Every*

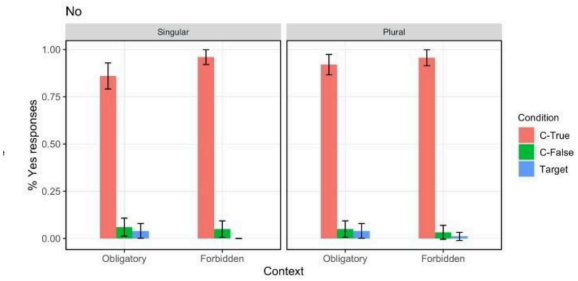

Figure 4: Expt. 1a rates for *No*

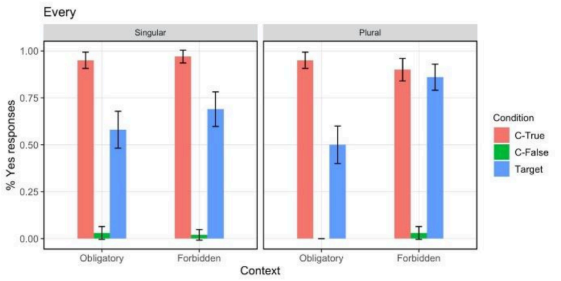

Figure 5: Expt. 1b rates for *Every*

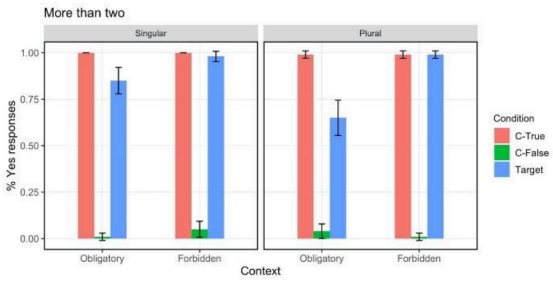

Figure 6: Expt. 1b rates for *More than 2*

References: [1] Krifka (1996) SALT; [2] Champollion et al. (2019) S&P; [3] Chierchia (2022) J.Sem; [4] Kriz (2016) J.Sem; [5] Bar- Lev (2020) L&P; [6] Geurts (2002) L&P. [7] Sun et al (2020) Sinn&B; [8] Denic & Sudo, (2022) JSem; [9] Kanazawa (1994) L&P.