PROCESSING CLOSEST AGREEMENT WITH DISJUNCTION SUBJECTS

Zheng Shen & Myung Hye Yoo (National University of Singapore)
zhengshen@nus.edu.sg   mhyoo@nus.edu.sg

Agreement with disjunction subjects in English can target the linearly closest disjunct NP (NP2) as shown in (1). This type of closest agreement (CA) is at odds with the traditionally assumed hierarchical structure. Keung and Staub (2018), among others, argue that a construction specific rule is available for disjunction subjects that the linearly closer NP can control for agreement. In addition, plural agreement is also available under disjunction as a default strategy (Foppoloa and Staub 2020). On the other hand, phenomena involving agreeing with a closer target like agreement attraction (2) are handled by sentence processing mechanisms like cue-based retrieval. However, Keung and Staub (2018) have shown that CA in (1) does not have the same properties as agreement attraction in (2). Thus it is unclear how closest agreement is processed.

(1)   The twins or Mary is/are going...   (2)   *The key to the doors are going...

We propose a cue-based retrieval approach to CA. The singular verb triggers search for the agreement targets specified as [+Subj, +SG]. In the context of disjunction subjects, both NPs within the disjunction are specified as [+Subj]. When NP1 is PL and NP2 is SG, the retrieval mechanism ignores the feature of NP1 due to its weakened representation in memory, resulting in CA. This approach predicts that the presence of intervening materials between NP1 and NP2 would further facilitate closest agreement with NP2, as the representation of NP1 would be further weakened. Our experiment confirms prediction.

Experiment We conducted a 2-alternative-forced-choice (2AFC) experiment with 48 English speakers. Three factors were manipulated: 1. number of NP1 (1S v. 1P); number of NP2 (2S. v. 2P); intervening material (non v. im). See (3) for the conditions. (A follow up experiment with definite article *the* yielded the same results.)

(3)   a.   These moons (rising pretty slowly) or those stars shining brightly (1P.2P.im/1P.2P.non)
          b.   These moons (rising pretty slowly) or that star shining brightly   (1P.2S.im/1P.2S.non)
          c.   This moon (rising pretty slowly) or those stars shining brightly   (1S.2P.im/1S.2P.non)
          d.   This moon (rising pretty slowly) or that star shining brightly   (1S.2S.im/1S.2S.non)

The disjunction subjects were presented word by word at 250 ms, after which the participants are instructed to choose between a singular and a plural verb (*is* v. *are* or *was* v. *were*) as the continuation. Each participants saw 10 items per condition, yielding 80 test items, plus 160 fillers.

Results and discussion The singular response ratio is shown in Figure. Given the availability of the default PL agreement under disjunction, the only unambiguous CA case is SG agreement with a 1P-2S disjunction. The results are thus analyzed as two 2*2 designs (2S conditions v. 2P conditions).

Generalized linear mixed effect models were constructed with number of NP1 and intervening materials as fixed effect. Looking at 1S-2S and 1P-2S conditions, the proportion of singular responses decreases if the first noun is plural (p < .0001). Crucially, there is a significant interaction between number of NP1 and intervening materials (p < .001). The singular ratio (i.e. CA) increases when there is intervening material between NP1 (PL) and NP2 (SG), but not between NP1 (SG) and NP2 (SG). In other words, the effect of plural NP1 on CA is reduced by the presence of intervening material, as is predicted.