

Do superiority-violating multiple singular *which*-questions have pair-list readings?

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Sentences like (1) with multiple singular *which*-phrases give rise to a *pair-list* (PL) and *single-pair* (SP) reading.

(1) Which boy likes which girl?

A complete answer to the PL reading of (1) determines for each boy which girl he likes. A complete answer to the SP reading is about a single boy-girl pair.

Kayne (1983) and Pesetsky (1987), among many others, point out that multiple *wh*-questions with *which*-phrases tolerate superiority violations, as in (2).

(2) Which girl does which boy like?

While the grammaticality of (2) is unquestionable, there is disagreement among scholars as to whether questions like (2) have PL readings. Specifically, Barss (2000) and Bošković (2001) claim that they only have SP readings, while Pesetsky (2000) and Kotek (2014) assume that they also allow PL readings, just like their superiority-obeying counterparts.

We conducted an online experiment to investigate which hypothesis is correct. The task of our experiment was to judge the felicity of question-answer pairs on a scale of 1 (very unnatural)–5 (very natural). There were 12 critical items, 6 of which involved superiority-obeying questions like (1) and 6 of which involved superiority-violating questions like (2). All of them were paired with a PL answer. They were presented with 6 filler items and 24 items from a separate experiment. The order of presentation was randomized for each participant, except that the first two items were always filler items.

34 self-claimed native speakers of English were recruited on Amazon Mechanical Turk and paid \$0.40 for their participation. The data from six of them were excluded from the analysis, as they did not provide correct answers to more than two filler items (where the correct answers are those that fall into the interquartile range calculated with all the subjects). For three of the fillers, the median rating was 5, and for two, it was 2 and for one, it was 1.

The results are summarized in Figure 1. As indicated by the thick horizontal bars, the median rating is 5 for both conditions, suggesting that PL readings are possible for both superiority-obeying and superiority-violating multiple singular *which*-questions. This runs counter to Barss's and Bošković's view.

However, we also observe a significant difference between the conditions such that superiority-violating questions are judged as less natural with PL answers (Wilcoxon signed-rank test: $W=1033$, $Z=-4.463$, $p < 0.001$). Furthermore, by-subject analyses of the data, summarized in Figure 2, indicate that this difference is driven by a subset of the subjects for whom PL readings are less natural with superiority violations. This suggests possible inter-speaker variation. If such variation exists, a theory of PL readings needs to be able to explain the existence of speakers for whom superiority-violating questions do not have PL readings.

(450 words)

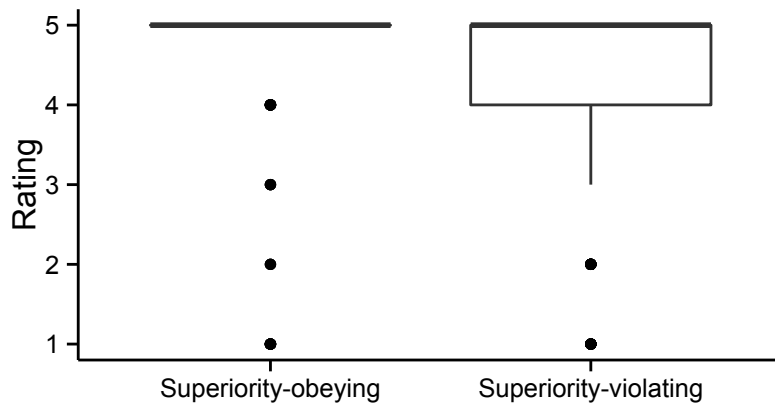


Figure 1

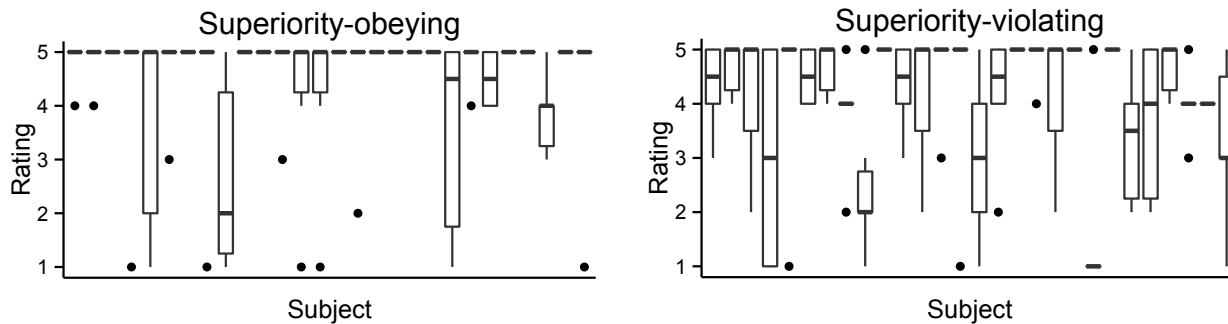


Figure 2

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