

1. SCOPE OF ATTRACTION

A study by Thornton & MacDonald (2003) suggested that in case of agreement attraction, not only the number feature, but also the identity of the subject itself could be represented erroneously:

- (1) The album by the classical composers ... PLAYED/PRAISED

If not only the morphosyntactic features of the subject noun, but its identity can be misrepresented, nothing restricts attraction processes to the morphosyntactic domain.

Is agreement attraction an instance of a more general processing phenomenon?

2. THIS STUDY

Our new contribution is manipulation of semantic features in addition to the morphosyntactic features.

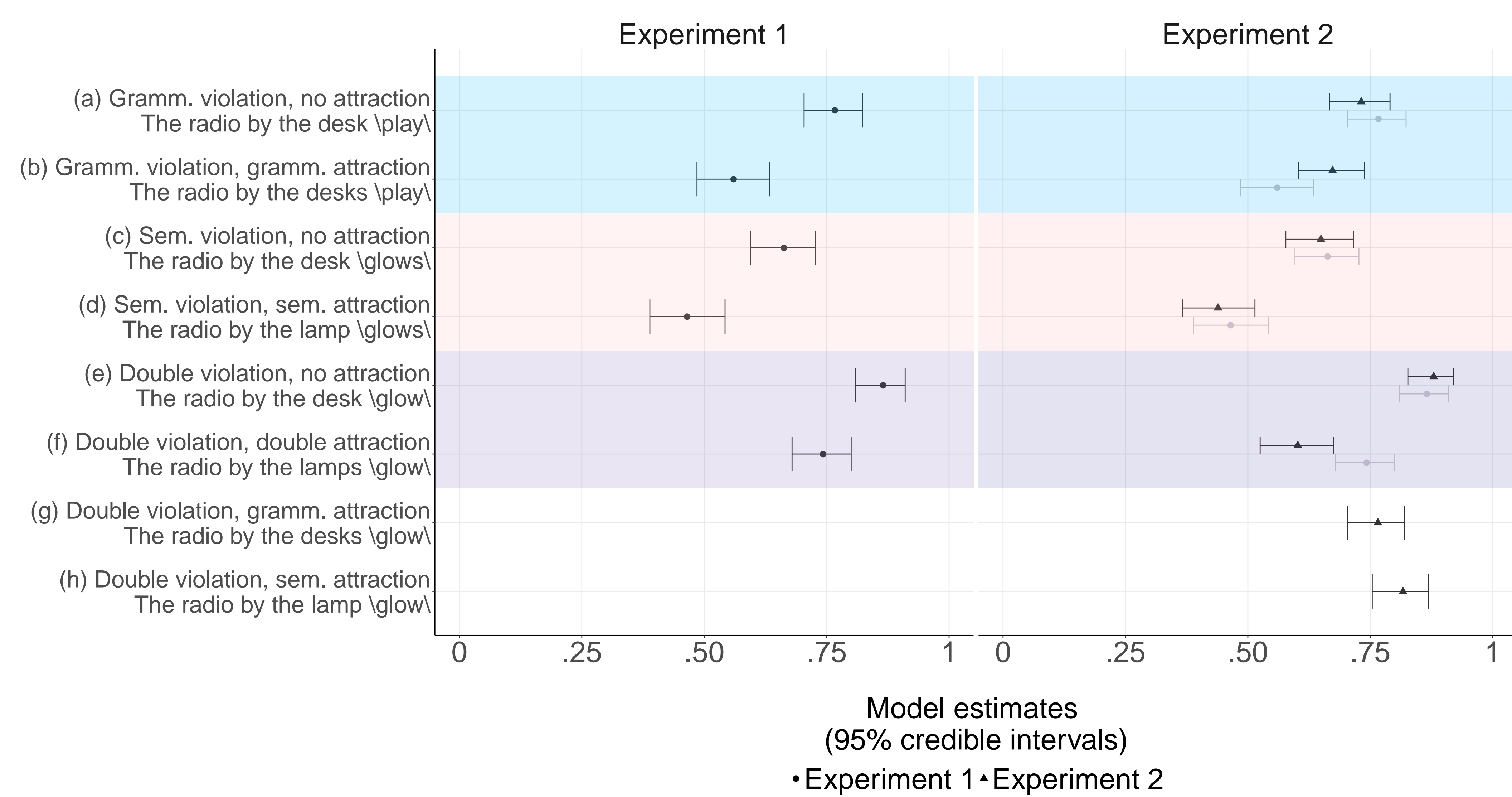
- 2 online experiments
- Single-trial procedure to avoid adaptation to stimuli
- Memorize the verb, see a sentence fragment, decide whether the verb fits into the fragment (see Thornton & MacDonald, 2003)
- 25 experimental items, 6 conditions in Experiment 1 (N=1072), 8 conditions in Experiment 2 (N=1426)
- All conditions were either ungrammatical or constituted bad semantic fit, or both
- Measure of interest – accuracy

3. DESIGN

We conducted 2 experiments in English manipulating the **VIOLATION** – mismatch of the verb and its grammatical subject in number and/or meaning and **ATTRACTION** – match/mismatch of the verb and the attractor noun in number and/or meaning:

VERB	SENTENCE FRAGMENT	VIOLATION	ATTRACTION
PLAY	a. The radio by the desk	grammatical	none
PLAY	b. The radio by the desks	grammatical	grammatical
GLOWS	c. The radio by the desk	semantic	none
GLOWS	d. The radio by the lamp	semantic	semantic
GLOW	e. The radio by the desk	double	none
GLOW	f. The radio by the lamps	double	double
GLOW	g. The radio by the desks	double	grammatical
GLOW	h. The radio by the lamp	double	semantic

4. RESULTS



5. COMPARISONS

- Grammatical attraction (b vs. a):** Present in Experiment 1 ($p=0.03$), not Experiment 2.
- Semantic attraction (d vs. c):** Present in Experiments 1 and 2 ($p < 0.0001$; $p = 0.002$).
- Double attraction (f vs. e):** Present in Experiments 1 and 2 ($p=0.01$; $p=0.0001$).
- Grammatical vs. semantic attraction:** No difference in effect size in both experiments.
- Semantic attraction in double violation (h vs. e):** Significant effect in Experiment 2 ($p=0.018$).
- Grammatical attraction in double violation (g vs. e):** no significant effect in Experiment 2.

6. DISCUSSION

- We demonstrate that non-syntactic features can provoke errors that mirror agreement attraction effects.
- Agreement attraction may not be a purely morphosyntactic phenomenon but just one instance of a broader class of processing errors.
- This result calls for a more general theory that could explain effects observed in different domains equally well.
- Memory-based retrieval (Lewis & Vasishth, 2005) and self-organized parsing (Smith, Franck, & Tabor, 2018) models may accommodate reported effects.