

# A morphological cue beats a semantic constraint in Turkish agreement attraction

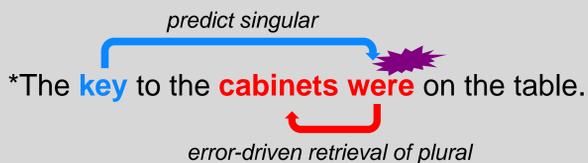
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## Background

Recent work suggests that illusory 'agreement attraction' in comprehension reflects a cue-based retrieval repair process.

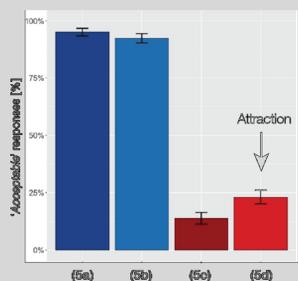


But does repair involve computing syntactic agreement between the retrieved plural attractor and the verb? Or is it a shallower process that is wholly satisfied by retrieval itself? **Turkish** has the answers—because of how number interacts with animacy.

The workers are **X** The countries is

### Some basics on Turkish agreement:

- In Turkish, plural subjects can optionally (and somewhat preferentially) take singular agreement on the verb (see Bamyacı, Häussler, & Kabak, 2014)
- However, Turkish speakers still show agreement attraction, albeit smaller, in comprehension (Lago, 2016):

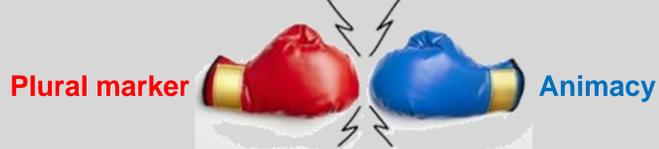


(5c) \*Öğrencinin danışmanı birden bayıldı~~lar~~.  
The student's advisor suddenly fainted.

(5d) \*Öğrencilerin danışmanı birden bayıldı~~lar~~.  
The students' advisor suddenly fainted.

- Critically, in Turkish, only *animate* plural nouns take plural verbal agreement—*inanimates* take singular verbal agreement

**Our question:** Can an inanimate plural act as an *attractor*, making an ungrammatical singular subject – plural verb sentence more acceptable—even though it doesn't take plural agreement itself?



## Methodology

- **Method:** Speeded acceptability judgment (collected online with Ibx)
- **Participants:** 44 native speakers of Turkish
- **Materials:** 96 sentences (32 critical & 64 fillers)
- **Task Design:** 2 (Animacy) × 2 (Grammaticality) × 2 (Attractor number)
- **Analysis:** Logistic mixed-effects model

## Example Items

### Animate Attractor

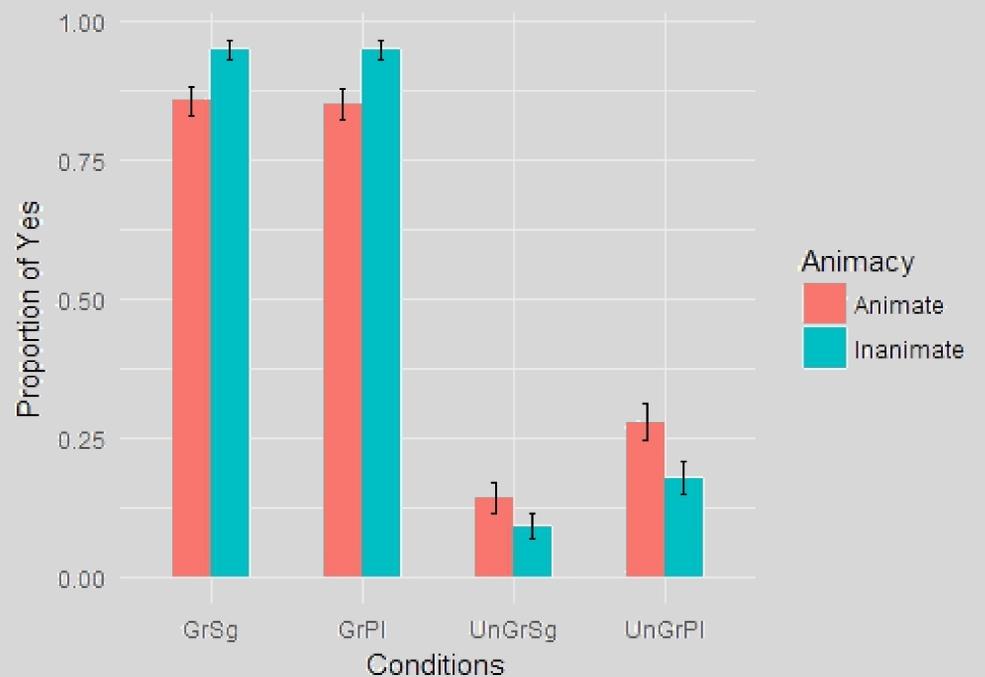
<b>Gram,</b>	Bu sabah [işçinin patronu konuştu] temizlik şartları hakkında.
<b>sg attractor</b>	This morning [the worker's boss talked] cleaning conditions about.
<b>Gram,</b>	..... [işçilerin patronu konuştu] .....
<b>pl attractor</b>	[the workers' boss talked] .....
<b>Ungram,</b>	*..... [işçinin patronu konuştular] .....
<b>sg attractor</b>	..... [the worker's boss talked] .....
<b>Ungram,</b>	*..... [işçilerin patronu konuştular] .....
<b>pl attractor</b>	..... [the workers' boss talked] .....

### Inanimate Attractor

<b>Gram,</b>	Son zamanlarda [ülkenin nüfusu arttı] hızlı bir şekilde.
<b>sg attractor</b>	Recently [the country's population increased] fast a rate(at).
<b>Gram,</b>	..... [ülkelerin nüfusu arttı] .....
<b>pl attractor</b>	[the countries' population increased] .....
<b>Ungram,</b>	*..... [ülkenin nüfusu arttılar] .....
<b>sg attractor</b>	..... [the country's population increased] .....
<b>Ungram,</b>	*..... [ülkelerin nüfusu arttılar] .....
<b>pl attractor</b>	..... [the countries' population increased] .....

## Results

Mean proportion 'acceptable' responses by grammaticality and attractor number. Error bars indicate standard error of the mean.



- We observe a **standard agreement attraction profile** across the board: ungrammatical sentences with plural attractors were accepted more than their counterparts with singular attractors, resulting in a significant interaction of grammaticality with attractor number ( $p < .05$ ).
- **Animacy of the attractor did not significantly modulate the size of attraction effects** ( $p = .8$ ), which was ~14% for the animate and ~9% for the inanimate attractors.

## Discussion

### Even though inanimate plurals take singular verbal agreement, animate and inanimate plural attractors produced similar rates of attraction in ungrammatical sentences

- The online repair process for subject-verb agreement in Turkish comprehension does not appear sensitive to animacy despite its status as a grammatical constraint on agreement
- Animacy is not used as a cue for retrieval, perhaps because it is not as reliable and easily detectable as the plural morpheme itself, which is formally similar (e.g., the same plural morpheme –IAr) on both subject and verb in Turkish.

## Conclusion

- Repair is satisfied simply by successful retrieval of a noun + plural chunk from memory. As a result, inanimate nouns drive illusions of grammaticality as well as animate nouns.
- These data provide novel support for the 'shallow repair' hypothesis, suggesting that agreement repair involves retrieval only and not syntactic licensing of verb number with the attractor.



## Future Work

- Adding an adverb between the subject and the verb to allow more time to think over the grammaticality of the sentence could drive deeper processing strategies involving syntactic licensing?
- Investigating attraction in the comprehension of advanced L2 speakers of Turkish who already disregard this animacy constraint in their production.