

I. BACKGROUND

STRUCTURE-BASED RETRIEVAL – only structural information is used for retrieval.

CUE-BASED RETRIEVAL – non-structural cues (i.e. gender, number) can be used for retrieval along with structural information.

III. 2×2 DESIGN

We ran an SPR study (N=85) in Russian: FACTOR I, INTERFERENCE: match/mismatch between the antecedent and the distractor in gender.

FACTOR II, REFLEXIVE TYPE: gender-unmarked (*sebja*) vs. gender-marked (*samogo/samu sebja*).

→ 32 experimental items, 32 fillers

IV. PREDICTIONS

ENCODING INTERFERENCE: main effect of interference, no interaction between interference and reflexive type.

RETRIEVAL INTERFERENCE: no main effect of interference, interaction between interference and reflexive type.

VII. DISCUSSION

→ Encoding interference cannot account for our results.

→ Retrieval interference as implemented in the cue-based retrieval model (Lewis and Vasishth, 2005) can explain our results (and similar results by Cunnings and Felser [2013], Sturt [2003]) under the assumption that at the moment of retrieval the baseline activation of the distractor is very high. For the present materials, it is indeed plausible to assume a high baseline activation of the distractor as it is in subject position and was recently introduced and retrieved (at the verb). A certain proportion of (fast) misretrievals of the gender-matching distractor might be responsible for the speed-up observed in the data.

VIII. CONCLUSION

We conclude that encoding interference is unlikely to explain the previously observed interference effects in reflexives. Thus, encoding interference is not a plausible explanation to reconcile the observation of interference effects with a structure-based account of reflexive processing.

REFERENCES

- Clackson & Heyer (2014), FRONT PSYCHOL 5(904).
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 Jäger et al. *subm.*, Teasing apart retrieval and encoding interference in the processing of anaphors.
 Lewis & Vasishth (2005), COGNITIVE SCI 29(3), 375-419.
 Patil et al. *unpubl.*, Retrieval interference in syntactic processing: The case of reflexive binding in English.
 Sturt (2003), J MEM LANG 48, 542-562.

II. REFLEXIVE PROCESSING

Badecker and Straub (2002) found that the reflexive is read slower in (b) than in (a):

- (1) a. **Distractor mismatch**
Jane thought that Bill_i owed *himself_i* another opportunity...
- b. **Distractor match**
John thought that Bill_i owed *himself_i* another opportunity...

→ Similar interference effects were found by Chen et al., 2012; Clackson and Heyer, 2014; Jäger et al., *subm.*; Patil et al., *unpubl. MS*.

→ The parser's sensitivity to a structurally inaccessible distractor has been interpreted in terms of retrieval interference ⇒ Incompatible with the structure-based account.

→ However, Dillon (2011, 2013) proposed encoding interference as an alternative explanation

⇒ If true, interference effects are compatible with the structure-based account.

ENCODING INTERFERENCE

Affects memory encoding and maintenance of items which have shared features. Degraded encoding/maintenance leads to problems at retrieval.

RETRIEVAL INTERFERENCE

Affects retrieval if more than one item shares features used for retrieval.

V. EXAMPLE ITEM

- (2) a. **Distractor mismatch**

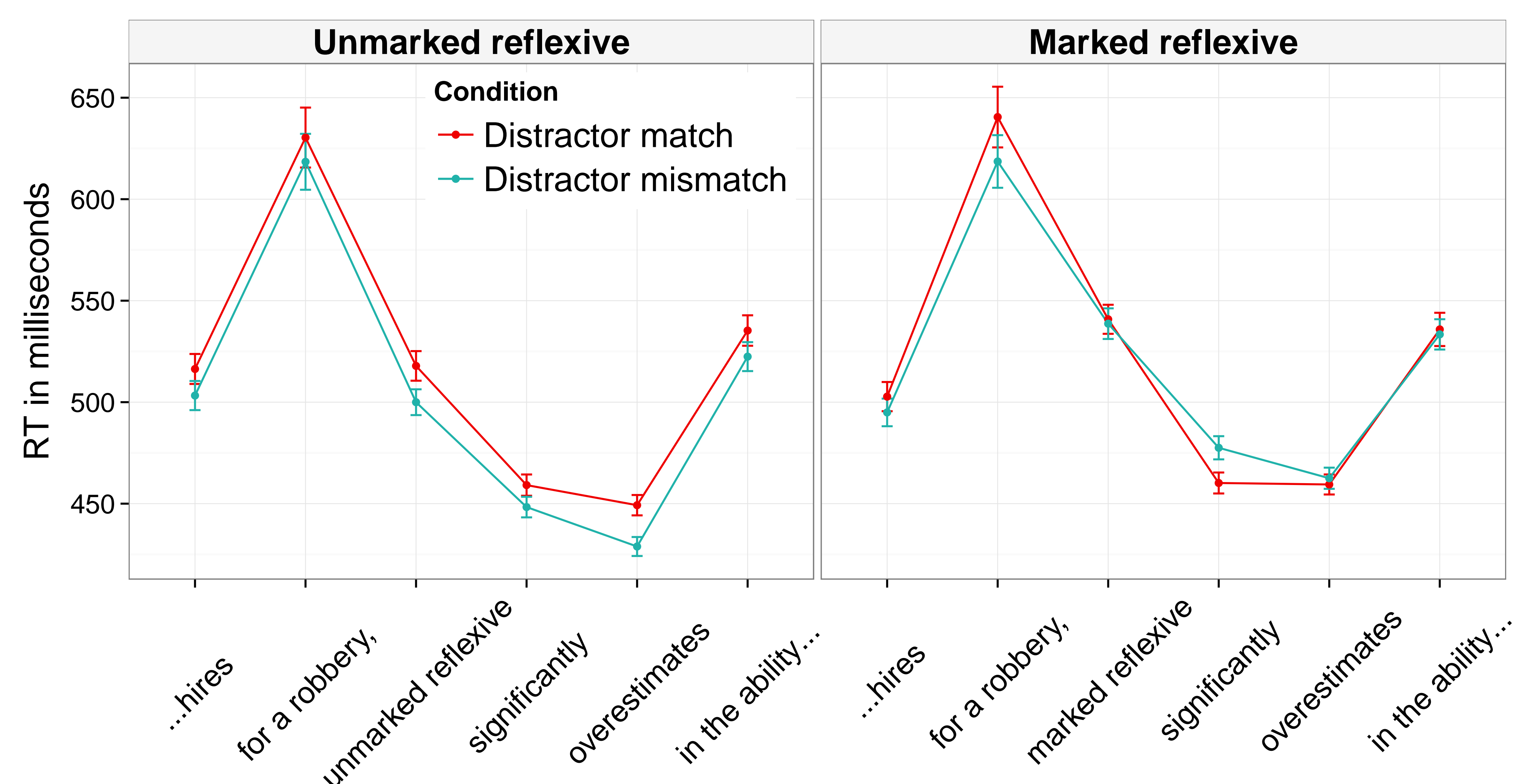
Aferistka_i, ktoruju *torgovec* nanimaet dlja ograblenija,
 The swindler_{fem} whom a merchant_{masc} hires for a robbery,
sebja_i/samu sebja_i serjezno pereotsenivaet v sposobnosti k obmanu.
self_{acc(∅)}/herself_{acc(fem)} significantly overestimates in the ability to do trickery.

- b. **Distractor match**

Aferistka_i, ktoruju *torgovka* nanimaet dlja ograblenija,
 The swindler_{fem} whom a merchant_{fem} hires for a robbery,
sebja_i/samu sebja_i serjezno pereotsenivaet v sposobnosti k obmanu.
self_{acc(∅)}/herself_{acc(fem)} significantly overestimates in the ability to do trickery.

“The swindler_{fem}, whom a merchant_{masc/fem} hires for a robbery, overestimates her_{∅/fem} trickery skills”.

VII. RESULTS



In the accuracy analysis we found a main effect of interference (Est.=0.41(0.08), $z=5.16$) with more incorrect responses in match conditions. In the RTs we found a significant interaction between reflexive type and interference on the word following the reflexive (Est.=0.013(0.005), $t=2.7$). Pairwise comparisons revealed facilitatory interference in marked reflexives (Est.=−0.01(0.007), $t=−2.1$) which was not present in unmarked reflexives.

