On object position in Persian ditransitives: movement or base-generation?

Elias Abdollahnejad & Dennis Ryan Storoshenko
School of Languages, Linguistics, Literatures, and Cultures

The Issue

• Relative positions of the direct object (DO) and indirect object (IO) in Persian ditransitive sentences depend on the specificity of the DO:

   S. for kid-PL book dur-read-3SG
   ‘Sara reads the kids’ books.’

   S. book=OM for kid-PL dur-read-3SG
   ‘Sara reads a specific book for the kids.’

Research Questions:
1. Is variation in the surface form of Persian ditransitive structure result of movement (Browning & E-Karimi, 1994) or variation in base generated position of DO (Karimi 2003)?
2. If the [Specific] DO does move across the IO, is this best analyzed as A- or A’- movement?

Linguistic Background

Specific DO has features of both A- and A’-movement
• Judgment-based syntactic analyses have not provided a clear analysis of this surface order variation

Two basic structures:
• Variation in base-generated positions: Two Object Position Hypothesis (Karimi, 2001)

• A’-movement: delayed reactivation, e.g. English Passive structure (Osterhout and Swinney, 1993), English unaccusative structure (Friedman et al. 2008)

Movement:
• Syntactic movement triggered by accusative/specificity feature
• Underlying order: IO-DO�(OM)[Specific] - V
(Mahajan 1992; Browning & E-Karimi 1994; among others).

A- or A’- movement?
• A-movement: Generally triggered by [Case], Short distance, ...
• A’-movement: Triggered by non-Case features, Associated with discourse, Long distance, ...

Psycholinguistic Background

• Trace Reactivation Hypothesis: The head of a movement chain is reactivated in the cognitive system when the parser encounters the tail (Swinney et al., 1988)

Cross Modal Lexical Priming (CMLP; Swinney et. al., 1979):
• While listening to a sentence, the participant, at some manipulated point, sees a string of letters (i.e. probe: real word or non-word) appearing on a computer screen for a limited time.
• Participants make a lexical decision (real word or not?)

• If the displaced element is reactivated at its original site, semantically related words will be recognized more quickly than unrelated words (Van de Koot et al., 2013)

Example:

Probe: DANGER (Identical -> lower RT)
Probe: RANGER (unrelated -> higher RT)

Methodology

• 40 native speakers of Persian, tested in Canada
• 36 ditransitive Persian sentences "DO�(OM)[Specific] - IO - V"

Probe Type: Identical to the DO or a semantically unrelated word (compatible in frequency and syllable number)

Probe position

<table>
<thead>
<tr>
<th>#</th>
<th>Control</th>
<th>500ms before IO offset</th>
<th>#2 (IO offset: Presumed copy)</th>
<th>#3 (750ms after IO offset)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identical</td>
<td>Condition 1</td>
<td>Condition 3</td>
<td>Condition 5</td>
<td></td>
</tr>
<tr>
<td>Unrelated</td>
<td>Condition 2</td>
<td>Condition 4</td>
<td>Condition 6</td>
<td></td>
</tr>
</tbody>
</table>

Results & Discussion

• Generalized Estimating Equation (GEE) Model (unbalanced repeated-measures design)

Results are consistent with A-movement

• Delayed priming effect, i.e. 750ms after Copy
• Not in line with A’-movement evidence, e.g. licencing parasitic gaps and toward long-distance movement

Conclusion

Our results support the claim that this surface variation in Persian ditransitives is the result of syntactic movement A-movement, opposing analyses claiming that the alternate word orders are formed purely through different base-generated VP structures.

Selected References


elias.abdollahnejad@ucalgary.ca
dstorosh@ucalgary.ca