

Persian ditransitives: movement for specificity?

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Issue The relative positions of direct object (DO) and indirect object (IO) in Persian ditransitive structures depend on the specificity of the DO, i.e. $DO_{[+Specific]}-IO$ and $IO-DO_{[-Specific]}$. Crucially, judgment-based syntactic analyses have not been able to provide a clear insight into how the surface-order is formed leading to inconclusive accounts of its underlying structure, e.g. it appears to license parasitic gaps, while not being subject to reconstruction or weak-crossover effect (Karimi, 2003). My results support the claim that this variation is the result of movement (Browning & E-Karimi, 1994), opposing analyses claiming that the different base-generated word orders are formed purely through different merge ordering (Karimi 2003).

Methodology This study uses Moving Window Self-Paced Reading (Just et al., 1982) in which participants are exposed to the stimuli sentences region by region. In this paradigm, exposure duration for each region is manipulated through button pressings of participants, while button-press reaction times are used to analyze the processing pattern. The fluctuations in button-pressing durations are interpreted as indicators of the differences in the difficulty of cognitive processes caused by complexities in meaning and structure of each region.

Study Thirty-two Persian speakers read 24 sentences intermixed with control items, each presented in seven sequential regions. Stimuli sentences were in 4 conditions, i.e. IO (*to landlord*) precedes $DO_{[-Specific]}$ (*rent* in i&ii) or follows $DO_{[+Specific]}$ (*rent=marker* in iii&iv). Syntactic movements have been observed to increase the processing load of the region preceding the original position of the dislocated element. Additionally, the more distant the movement is, the more difficult the processing load is (Gibson, 1998; Just & Carpenter, 1992). Thus, assuming a movement analysis, as $DO_{[+Specific]}$ has undergone a longer movement in (iv) than (iii), its reading time at the sixth region is expected to be longer, while such a difference is not expected for (i) and (ii), i.e. not preceded by movement.

	<i>region 1</i>	<i>region 2</i>	<i>region 3</i>	<i>region 4</i>	<i>region 5</i>	<i>region 6 (critical region)</i>	<i>region 7</i>
i.	John	wanted	using	credit-card	<u>to-landlord</u> _[IO]	rent _[-Specific DO]	do-pay.
ii.	John	wanted	<u>to-landlord</u>	using	credit-card _[IO]	rent _[-Specific DO]	do-pay.
iii.	John	wanted	using	credit-card	rent _[+Specific DO]	<u>to-landlord</u> _[IO]	rent do-pay.
iv.	John	wanted	rent _[+Specific DO]	using	credit-card	<u>to-landlord</u> _[IO]	rent do-pay.

“John wanted to pay (i&ii) rent in general/(iii&iv) a specific rent to the landlord by credit card.”

Results The results of the linear-mixed effect analysis (Bates et al., 2014) show significantly longer reading times for region 6 in (iv) compared to (iii) ($p < 0.05$), while no significant difference between (i) and (ii) in the reading times of sixth region was observed ($p > 0.05$).

Discussion The results of this study support the analysis that the position of DOs in Persian ditransitives is the result of the movement of $DO_{[+Specific]}$ across IO. Such clear evidence for a gap takes us beyond the judgment-based analyses that could not distinguish between A-movement versus two different base-generated word orders. However, while we have support for a gap caused by movement, future research remains to find the exact nature of the movement.

References

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