Length effects in an OV language with Differential Object Marking and mixed head direction

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Length effects in an OV language with Differential Object Marking and mixed head direction

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Background

Two types of accounts are available for the **Long-before-short (LbS) preference** observed in OV languages (e.g. Japanese, Basque, Korean):

1. Processing-oriented accounts: Hawkins 1994, 2004 (EIC/MiD & MaOP); Gibson, 2000 (DLT); also Wasow (2002, 2013)'s "avoiding center embedding"

   Maximize processing efficiency → Minimize dependencies: Predict mirror-image preferences for head-final (LbS) and head-initial (SbL) languages

2. Production-oriented account: Yamashita & Chang, 2001; Chang, 2009 | Built on conflicting properties of longer constituents: more complex but also more salient

   Accessibility-based production (divided into conceptual vs. formal arenas) modulated by language-specific factors and the position of the verb:

   • Form-related factors stronger in rigid languages with no null pronouns & VO → less complex first (e.g. English)

   • Conceptual factors stronger in flexible languages with null pronouns & OV → salient first (e.g. Japanese)

   > But see Tanaka et al. (2011)'s theoretical objection, refuting the assumption that conceptual accessibility could behave differently in head-final languages.

➢ Recent studies on Basque (Ros et al., 2015), following Tanaka et al. (2011), reject the salient-first hypothesis in favor of processing-oriented accounts.

Goal of this study: Teasing apart these two accounts
Interest of Persian: SOV with mixed head direction and DOM

• SOV with flexible word order & null pronouns - like Japanese & Basque
• Head-initial in NP, PP & CP - unlike Japanese & Basque (and like VO languages, e.g. English)
• Non rigid verb-final & rich verbal agreement - like Basque and unlike Japanese

Previous Studies (Corpus-based and Experimental) on Ditransitive Constructions in Persian

Differential Object Marking (DOM): A definite and/or specific DO is always marked with =rā

Bare nouns lack any determination or quantification and are not specified for number
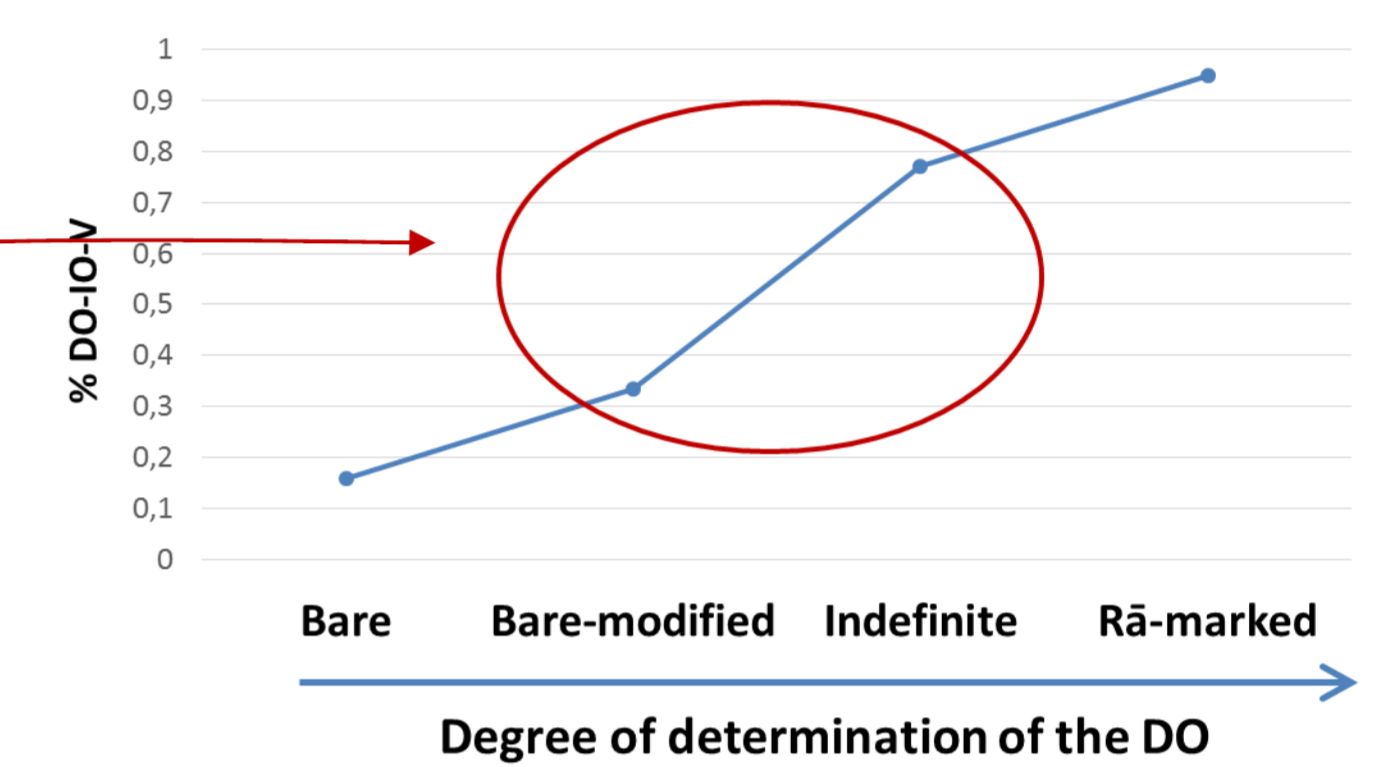
Four DO types:
1. Rā-marked DOs
2. Indefinite/quantified (non-*rā*-marked) DOs
3. Bare nouns with adjuncts
4. Bare nouns with no adjuncts

The relative order between the DO and the IO depends on:

1) The degree of determination/definiteness of the DO:

   DOM favors DO-IO-V while bareness favors IO-DO-V.

2) Long-before-short preference (only) for intermediate DOs.

→ **Processing-oriented accounts do not support these preferences while they are compatible with the salient-first hypothesis.**

(cf. Faghiri & Samvelian, 2014; Faghiri, Samvelian & Hemforth, 2013, 2014)

Object of the study: Ordering Preferences in Transitive Constructions in Persian

We study the interaction between the relative length and other conceptual factors like animacy in order to investigate the relevance of the conceptual hypothesis. N.B. Previous studies on Basque and Japanese did not consider the interaction of the relative length with (other) conceptual factors.

Animacy is a known cross-linguistic conceptual factor to play a significant role in word order preferences especially with respect to the relative order between the subject and the object (e.g. Branigan & Feleki, 1999; Kempen & Harbusch, 2004; Branigan et al., 2008), while the contribution of length to conceptual accessibility remains controversial (e.g. Tanaka et al., 2011).

Experimental hypothesis: We expect the effect of the animacy to be stronger than the effect of the relative length.

Pilot corpus study (Bijankhan corpus: 2,6m tokens, from *Hamshahri* newspaper): Only *rā*-marked DOs appear in the OSV order (at the overall rate of 4.6%)
➢ DOM/Definiteness is highly relevant → Preliminary (expected) observation: The more a DO is salient the more it is likely to precede the subject.

Method

We ran a sentence completion experiment, via a web-based questionnaire on Ibex Farm platform (Alex Drummond, http://www.spellout.net/ibexfarm/).
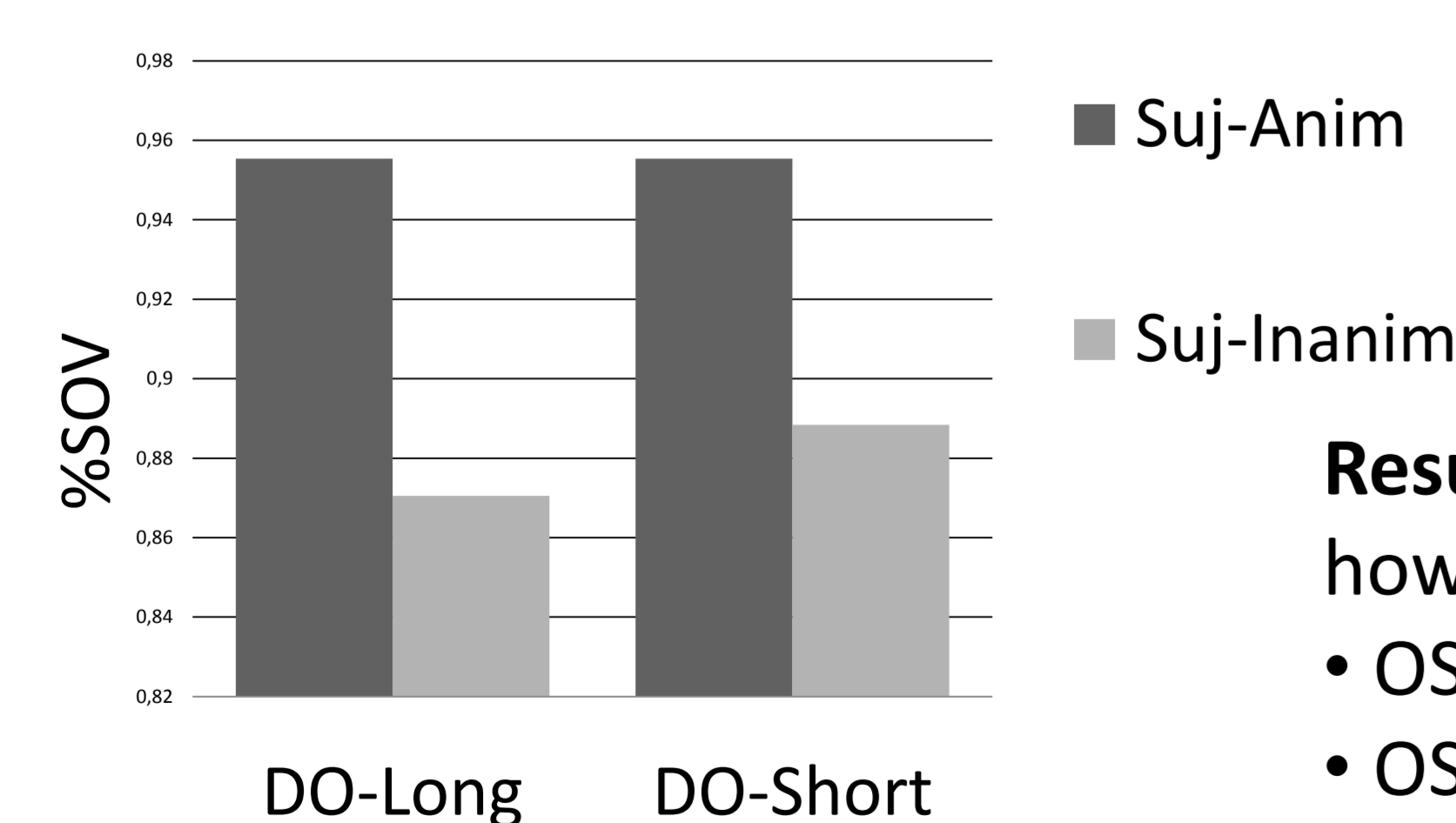**Procedure:** Each item is presented by a preamble, three blank boxes, and a list of four elements, containing a subject, a DO and two choices of verbs, as illustrated below. Participants are asked to complete the sentence using the provided options.

Design: 20 target items, following a 2x2 Latin Square design, manipulating the animacy of the subject and the length of the DO (via a RC), mixed with 25 fillers. DOs in all items are animate and *rā*-marked.   **Participants:** 56 native speakers of Persian recruited via social networks.

مادربزرگ گفت ...

'awake did'   بیدار کرد
'child=DOM'   بچّه را
'Alireza'   علیرضا
'happy did'   خوشحال کرد

Options appeared in a counterbalanced order.

Grandma said …

(a) Sub-Anim / DO-Short

Alireza bačče=rā   bidār-kard
Alireza child=DOM   awake-did
'Alireza woke up the child.'

(c) Sub-Inanim / DO-Short

sarosedā bačče=rā   bidār-kard
noise   child=DOM   awake-did
'The noise woke up the child.'

(b) Sub-Anim / DO-Long

Alireza bačče=rā ke tab dāsht bidār-kard
Alireza child=DOM that fever had awake-did
'Alireza woke up the child who had a fever.'

(d) Sub-Inanim / DO-Long

sarosedā bačče=rā ke tab dāsht bidār-kard
noise   child=DOM that fever had awake-did
'The noise woke up the child who had a fever.'

Results: The overall rate of OSV is relatively low (8.25%). We found a highly significant effect for animacy ($p<.01$), however length did not show a significant effect ($p>.5$).
• OSV order was more frequent for inanimate subjects: 12% (ex. c & d) vs. 4.46 %. (ex. a & b)
• OSV order was only slightly more frequent for longer DOs, only with inanimate subjects: 8.7% (ex. d) vs. 7.81% (ex. c)

Discussion and Conclusions

1. Our study provides cross-linguistic evidence for the already well-established general preference to order animate constituents before inanimate ones.
2. The fact that we find no effects of the relative length undermines dependency-minimizing accounts as well as "avoiding center-embedding" hypothesis.
3. These results confirm our experimental hypothesis, suggesting the relevance of the conceptual accessibility hypothesis for LbS in OV languages. Assuming that animacy and definiteness of a constituent are stronger conceptual factors than its length, we suggest that it is highly likely for the effect of length to be undermined by the joint effect of the former. To further investigate the interaction between length and animacy, in future research we will manipulate the length of inanimate indefinite subjects, for which we expect to find some effect of length (rather than none as observed in this study).