Heaviness in a Verb-final Language: Evidence from Persian

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Introduction

• Is the short-before-long principle universal?
  → Heavy constituents require more processing resources (e.g. Arnold et al, 2000; Stalling et al, 1998)
  → Costly constituents tend to be postponed

• Meanwhile, Hawkins’s Early Immediate Constituent (EIC) principles predicts opposite tendencies
  → For head-initial and head-final languages (Hawkins, 1990 a.o.)
  → Long-before-short in head-final languages
  → Confirmed for Japanese by corpus and experimental data (Hawkins, 1994; Yamashita & Chang, 2001)

Persian: Essential Properties

• Mixed head direction:
  Head-final in verbal domain (SOV)
  Head-initial elsewhere
e.g. Det N Mod, Prep NP, Comp P

• EIC does not (always) work for Persian:
  NP PP V
  PP NP V

• Canonical word order is SOV
• But variation is possible (SVO, VSO, etc.)
  Depending on register, information structure, prosody, etc.
e.g. Goal arguments are post-verbal in oral/informal register
  • Clausal complements are strictly post-verbal

• Differential Object Marking (DOM)
  A definite and/or specific DO is always marked with ْنَرَأ (cf. ex 4)
  An indefinite non-specific DO is not marked (cf. ex 1 – 3)

Object of this study:
Preferential order between the DO and the IO in the preverbal domain

Corpus Study

Corpus:
Bijankhan corpus : 2,6m tokens, from newspapers, annotated for POS, freely available
Verbs were lemmatized and potentially ditransitive verbs were extracted (42k tokens, 122 types)
Dataset (908 tokens, 82 lemmas):
Selection of sentences out of
  2. All instances of verbs ‘to send’ and ‘to pour’ (low frequency)
  3. Random samples of verbs ‘to give’ and ‘to take’ (very high frequency)

Dependent variable: Order (NP PP V = 1)
Random effect: Verb lemma
Average preference of 59% for NP-PP-V order

DO type determines the relative order in 87% of cases

Beyond the strong effect of DO type, relative length shows a significant effect (p-value < 0.001) corresponding to the long-before-short tendency

The Relative Length

Discussion and Conclusions

• The short-before-long principle is not universal:
  Not only Japanese (strictly head-final) but also Persian (mixed head-direction) presents the long-before-short tendency
  → The verbal position has to be taken into account in the effect of relative length on preferential order between verbal complements
  → Theories solely based on general principles ignoring linguistic parameters would eventually fail cross-linguistic validity
  → Theories proposing accounts in terms of dependency seems to be more appropriate
  → However Hawkins’s EIC principles fail to account for Persian data

• In Persian the relative length plays only a secondary role while the DO type, which depends on the information status of the NP, plays the essential role

We are currently running a number of experiments to explore the effect of information structure and the relative length independently