How does animacy affect word order in a VOS language?

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Abstract

Although language production mechanism is often assumed to be universal, the range of languages investigated so far is quite limited. We conducted a picture description task to clarify how conceptual accessibility affects word order selection and how incremental language production is in Kaqchikel which is Object-Subject order language spoken in Guatemala. Although Kaqchikel speakers tend to produce passive sentence with animate patient, a tendency to mention animate entity before inanimate entity was not observed. These results support a weakly incremental view on language production.

Introduction

1. Direct hypothesis

• Conceptual accessibility correlates only with the serial order among constituents (1).
• More accessible entity tends to be assigned an earlier position in a sentence.

2. Indirect hypothesis

• Conceptual accessibility correlates with grammatical function (1).
• More accessible entity tends to be assigned a higher grammatical function along with Noun Phrase Accessibility Hierarchy (NPAH: SU > DO > IO > ...).
• More passive structures are produced with animate patient.

Conceptual accessibility drive speakers to choose a syntactic structure in which accessible concept can serve as syntactic subject (4).

Research Questions

Does OS language have a tendency to mention more accessible entity before less accessible entity?
• Does Animate entity tend to follow inanimate entity in language production?

What is the relation between conceptual accessibility and the word order in OS languages?
• Pullum (1977) proposed principles for linearization in word’s languages [5].
• Fundamental principle: NPs are linearized along with NPAH. Additional principle: Subject NP is assigned the final position in VOS languages.

Kaqchikel (OS language)

1. Advantage of Kaqchikel

• Word order alternation is independent of voice alternation.
• Head-marking and ergative language
• Grammatical function and number of NPs agree with prefixes of verb.

2. Constituent order


3. Voice system

• passive, anti-passive
• active and passive voice is relevant in our experiment.

• Examples
  a. X-qa-tuch ch’öya ri ak’wal ri xam (VOS)
    COM-erg.3s-abs.3s-slept the girl the boy
  b. ri xam x-a-qa-tuch ch’öya ri ak’wal (VOS)
    the girl COM-erg.3s-abs.3s-slept the boy the girl
  c. ri ak’wal x-a-qa-tuch ch’öya ri xam (VOS)
    ri ak’wal COM-erg.3s-abs.3s-slept the girl the boy

Discussion

1. Significant tendency to assign human patient to subject function.
• More passive use with human patient than object patient.
• We did not find crucial tendency to mention animate entity earlier than inanimate entity in Kaqchikel.
• Although SVO order is most frequently in active sentence, VOS order is more often when patient is object.
• This result does not support direct effect of conceptual accessibility.
• This tendency follows Pullum’s assumption of linearization.

2. Difference among SO language and OS language.
• Recent work on Japanese (SO language) suggests indirect effect also influences the serial word order in a way such that animate entity tends to be assigned not only subject function but also earlier position (ITI).
• Kaqchikel speaker has a tendency to assign more accessible entity with higher grammatical function, but not in the earlier position of the sentence.

What distinguish Kaqchikel from SO languages?

• Since Kaqchikel is different from SO language, basic word order of OS language may not be compatible with NPAH directly.
• NPAH show directly impact on grammatical function assignment but only indirectly influence linear order assignment.
• Our results support weakly incremental view of sentence production.

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References:

Method

Participants: 60 native Kaqchikel speakers.
Task: Participants verbally describe the target pictures in a simple sentence.
Design: 1*3 (patient animacy: Human, Animal (and Object)).
Materials: 24 target pictures manipulating patient animacy.

Procedure: Experiment was conducted by a native Kaqchikel speaker in a quiet room in Antigua, Guatemala.
Analysis: Mixed effect logistic regression.

Result

<table>
<thead>
<tr>
<th></th>
<th>Human-Human</th>
<th>Human-Animal</th>
<th>Human-Object</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOS</td>
<td>26 (10.5%)</td>
<td>47 (17.5%)</td>
<td>100 (37.9%)</td>
<td>173 (22.2%)</td>
</tr>
<tr>
<td>VSO</td>
<td>3 (1.2%)</td>
<td>5 (1.9%)</td>
<td>1 (0.4%)</td>
<td>9 (1.2%)</td>
</tr>
<tr>
<td>Passive</td>
<td>11 (4.4%)</td>
<td>6 (2.2%)</td>
<td>2 (0.6%)</td>
<td>19 (2.4%)</td>
</tr>
<tr>
<td>Anti-passive</td>
<td>22 (8.3%)</td>
<td>3 (1.1%)</td>
<td>1 (0.4%)</td>
<td>26 (3.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>11 (4.4%)</td>
<td>5 (1.9%)</td>
<td>4 (1.5%)</td>
<td>20 (2.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>248 (100%)</td>
<td>268 (100%)</td>
<td>264 (100%)</td>
<td>780 (100%)</td>
</tr>
</tbody>
</table>

Voice
- More passive structure with human patient than object patient (p<.05).

Constituent Order
- More SVO order than VOS order (68.3% vs. 22.2%).
- More VOS order with inanimate object than other two conditions (p<.001).

Discussion

VOS/SVO

References: