Background: Hierarchy Effects in Agreement

Hierarchical Agreement: The verb agrees with the argument which is highest on a prominence scale.

Inverse Marking: The verb shows inverse marking of the object higher on a prominence scale than the subject.

(1) Person-driven hierarchical agreement and inverse marking in Muše

1st person: and person 1 and person 2

- Intransitive: Direct
- Transitive: Hetho-h aŋ + uŋ

(2) Number-driven hierarchical agreement in Dumi

- 3pl objects should not allow subject
- 2nd person objects should not allow subject
- It is usually implicitly assumed, that the use of formal marking – as also known from other hierarchy effects (e.g. Differential Object Marking).

Analysis

- The Karuk agreement pattern strictly follows the canonical person hierarchy: [1, 2] > 3
- The (1±2)±3 cases cannot be reduced to 1 > 2; 2 > 1; A > P; P > A; pl > sg, etc.
- They depend on specific person/number combinations in default agreement.

(3) Constructions from possible simple scales resulting from sg-sg subject and pl-qp object agreement:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Object</th>
<th>Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg</td>
<td>sg</td>
<td>pl-pl</td>
</tr>
<tr>
<td>sg</td>
<td>qp</td>
<td>pl-pl</td>
</tr>
<tr>
<td>pl</td>
<td>sg</td>
<td>pl-pl</td>
</tr>
<tr>
<td>pl</td>
<td>qp</td>
<td>pl-pl</td>
</tr>
</tbody>
</table>

Hypothesis

- The agreement pattern is based on a complex hierarchy: 1 > 2pl > 2sg > 3plA > 3plP > 3sgA > 3sgP

- Mismatches on the scale are weighted

Implementation

- Sub-differentiate equally ordered categories of a more important scale
- Apply a less important scale
- Conserve the restrictions of the more important scale(s)

(4) Base scales for composition

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2pl</td>
<td>2sg</td>
<td>3plA</td>
<td>3plP</td>
</tr>
</tbody>
</table>

(5) Complex scale for Karuk hierarchical agreement

Data: Person Agreement in Karuk

The Karuk Language

- Nearly extinct Amerindian language of Northwestern California
- Part of the (controversial) Hokan Language family and forming a sprachbund with other languages of the area (Yurok, Hupa, Chimaruta)

Agreement morphology using prefixes and suffixes akin to similar systems in Algónquian and Algoí (e.g. Cree and Yurok)

<table>
<thead>
<tr>
<th>2pl</th>
<th>1pl</th>
<th>3sg</th>
<th>3pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>-hit</td>
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<td>-hit</td>
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<th>2sg</th>
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</tbody>
</table>

Technical Details

Optimality Theoretic Derivation of Scale Effects

(6) (a) Constraints(X)

Counts a constraint violation for every output with more than one marker that realizes features of type X.

(7) A marker that realizes the person feature of the object

(c) Constraints(X):Y

If one transitive argument outside the one that may be (or not) steps on the following scale in the input

| 1 > 2pl > 2sg > 3plA > 3plP |

| 3plP | 3sgA | 3sgP |

Count a constraint violation for every output without a marker that realizes the person feature of the higher one.

References

Béjar, S. (2003). Language and the use of formal marking – as also known from other hierarchy effects (e.g. Differential Object Marking).

Complex Scales in Multiargument Agreement

Sebastian Bank & Jochen Trommer, University of Leipzig

Page dimensions: 2466.1x3373.2

Modern and subject choice in Optimality Theory. Natural Language and Linguistic Theory, 17(1-2), 59-93.
Béjar, S. (2003). Language and the use of formal marking – as also known from other hierarchy effects (e.g. Differential Object Marking).