AGREEMENT BETWEEN XPS: THE INVISIBLE 𝜈(𝕊) ¹

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0. INTRODUCTION

GOALS:
• present and analyze new agreement data from Archi
• derive evidence for multiple little 𝜈’s from Archi agreement
• extend the Archi analysis to other languages with complex agreement

AGREEMENT:
• Verb-Argument
• Agreement exponents are on the verb

Archi (Nakh-Dagestani; Russia):
• Agreement exponents are on the verb
• Agreement exponents can also be on DPs (1), Adverbs (2), and PPs (3)

(1) to-r-mi  b-ez  χˤošon  a<b>u.
that.ONE-II.SG-ERG III.SG-1SG.DAT dress.III.SG.ABS  <III.SG>make.PFV
‘She made me a dress.’

(2)  o〈b›qˤa-t:u-b  balah  dit:a›b›u  b-eryin
〈III.SG〉leave.PFV-ATR-III.SG  trouble.III.SG.ABS  quickly〈III.SG〉  III.SG-forget.IPFV
‘Past trouble gets forgotten quickly.’ (Kibrik et al. 1977: 186)

(3)  to-r  d-aqˤa  maʁa-k  e‹q‘en
that-II.SG.ABS  II.SG-come.PFV  magar-LAT  〈II.SG〉up.to
‘She went up to the Magar village.’

PROPOSAL:
• multiple layers inside 𝑳𝑷
• 𝜈 is responsible for agreement
• agreement markers on XP result from post-syntactic morphological operations
• agreement markers on DPs and PPs are an illusion created by the presence of silent 𝜈 heads

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OUTLINE OF THE TALK:

- overview of Archi
- agreement facts
- structure of vP in Archi
- post-syntactic operations in Archi
- similar phenomena in other languages

1. ARCHI: INTRODUCTION

- Nakh-Dagestanian language
- Spoken in Dagestan (Russia) by 1,200 people

Table 1: Nakh-Daghestanian languages

<table>
<thead>
<tr>
<th>Nakh</th>
<th>Avar</th>
<th>Andic</th>
<th>Tsezic</th>
<th>Lak</th>
<th>Dargi</th>
<th>Lezgic</th>
<th>Khinalugh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chechen-Ingush</td>
<td>Avar</td>
<td>Akhvakh Andi</td>
<td>Bezhta Hunaq</td>
<td>Lak</td>
<td>Dargi</td>
<td>Archi</td>
<td>Nuclear Lezgic</td>
</tr>
<tr>
<td>Chechen</td>
<td>Andi</td>
<td>Bagwalal Botlikh</td>
<td>Hunaq Hunzib Khvarshi</td>
<td>Lak</td>
<td>Dargi</td>
<td>Archi</td>
<td>Aghul</td>
</tr>
<tr>
<td>Ingush</td>
<td>Chamalal Godoberi Karata Tindi</td>
<td>Bezhta Hunaq Hunzib Khvarshi Tsez</td>
<td>Archi</td>
<td>Nuclear Lezgic Aghul Budukh Kryz Lezgian Rutul Tabassaran Tsakhir Udi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tsova-Tush (=Batsbi)</td>
<td>Bezhta Hunaq Hunzib Khvarshi Tsez</td>
<td>Bezhta Hunaq Hunzib Khvarshi Tsez</td>
<td>Bezhta Hunaq Hunzib Khvarshi Tsez</td>
<td></td>
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</tbody>
</table>

MAIN PROPERTIES OF ARCHI:

- Head-final, with relatively free word order in root clauses
- Ergative-absolutive alignment
- Absolutive always determines agreement
- Pro-drop

(4) buwa da-q’α.
    mother.1.ABS.SG II.SG-come.PFV
    ‘Mother came.’

(5) dija-mu buwa χir a-q’u.
    father.1-SG.ERG mother.11.SG.ABS behind 11.SG-do.PFV
    ‘Father brought mother with him.’

(6) u’nš:al-li hilku b-ukne.
    lizard.11-SG.ERG fly.11.SG.ABS III.SG-eat.PFV
    ‘The lizard ate the fly.’

(7) bošor-mi-s k’an χo.
    man.1-OBL.SG-DAT horseshoe.1V.SG.ABS find.1V.SG.PFV
    ‘A man found a horseshoe.’
AGREEMENT IN ARCHI:
- determined by Absolutive
- agreement in noun class (four classes)
- no person agreement (but see Chumakina et al. 2007 who suggest that Archi has person agreement)

NOUN CLASSES:
- Natural gender
- Number
- Human/non-human

Table 2: Noun classes in Archi (verbal exponents)

<table>
<thead>
<tr>
<th>CLASS</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SINGULAR</td>
</tr>
<tr>
<td>I (male human)</td>
<td>w-&lt;w&gt;</td>
</tr>
<tr>
<td>II (female human)</td>
<td>d-/d&gt;</td>
</tr>
<tr>
<td>III (some animates, all insects, some inanimates)</td>
<td>b-/b&gt;</td>
</tr>
<tr>
<td>IV (some animates, some inanimates, abstracts)</td>
<td>Ø-/Ø&gt;</td>
</tr>
</tbody>
</table>

NOUN CLASS AGREEMENT EXPONENTS:
- Prefixes, infixes, or both
- Some verbs do not show overt agreement (10)

(8) to-r łônol šw'as q'ot d-ak'a.
that.one-II.SG woman.II.SG.ABS last.year in.winter II.SG-die.PFV
‘That woman died last winter.’

(9) bošor š-anši aʔaʔ-r-ši i-wdī.
man.I.SG.ABS yesterday call-IPFV-CVB2 d.I.SG.be.PST
‘A man was calling yesterday.’

(10) tu-w adam-li-s moroženij kl'an.
that.one-I.SG person.IV-OBL.SG-DAT ice-cream.IV.SG.ABS want
‘That man wants ice cream.’

(11) š-anši nen akl’ č'arq'a-s uw.
yesterday 1PL.EXCL.ERG meat.IV.SG.ABS roast-INF do.IV.SG.PFV
‘Yesterday we roasted meat.’
2. “Exuberant Agreement” in Archi

“Exuberant Agreement” (Harris 2008):
  • Several exponents of agreement with the same argument

Agreement Marking on DPs:
  • 1st and 2nd person pronouns
  • dative/ergative/genitive DPs

(12) šwəš qənɔt d-ak'a-t:u-r ũ:anna b-el
  last.year in.winter II.SG-die.PFV-ATR-II.SG woman.II.SG.ERG III.SG-1PL.DAT
  χabar b-ar-ti-r-ši e(b)di.
  story.II.SG.ABS III.SG-(IPFV)let.go-IPFV-CVB2 (III.SG)BE.PAST
  ‘The woman who died last winter was telling us stories.’

(13) d-ez un malgan.
   II.SG-1SG.DAT 2SG.ABS.II be.dear
   ‘You (female) are dear to me (male).’

(14) Nena<ub> b-is televizor dit:a<ub> mu
   1PL.EXCL.ERG<III.SG> III.SG-1.SG.GEN tv.II.ABS quickly<III.SG> be.good
   a<ub>u.
   do-PFV<III.SG>
   ‘We fixed this TV quickly.’

(15) b-is duqrıq' χ'on b-i.
   III.SG-1.SG.GEN village.IV.IN cow.II.SG.ABS III.SG-be.PRS
   ‘I have a cow in the village’.

Agreement Marking on Adverbs:
  • low adverbs
  • only few adverbs can show agreement

(17) tu-w tej-me-s w-allej<ow>u w-irχ̂ni.
    that.1.SG.ABS that.1.OBL.PL-OBL.PL-DAT 1.SG-for.free<1.SG> 1.SG-work.PFV
    ‘He worked for them for free.’

(18) Tor-mi zheq'dij<ub> χ'ali a<ub>uli b-it’u.
    she-ERG self.way<III.SG> bread.II.SG.ABS <III.SG>make III.SG-be.PRS-NEG
    'She did not bake bread her own way (the way she wanted).’
AGREEMENT MARKING ON PPs:
• only one postposition has an agreement slot

(19) b-ez zulu b-oχo
III.SG-1SG.DAT spring.III.SG.ABS III.SG-find.PFV
olo duχriq’ak e<β>q’en
IPL.GEN village.IV.SG.INTER-LAT <III.SG>up.to
‘I found the spring (somewhere) up to our village.’

TWO OPTIONS:
• heads (D, P, and Adv) have [uCL]
• agreement markers are reflex of verbal agreement

3. ANALYSIS OF “EXUBERANT AGREEMENT”

PROPOSAL (IN A NUTSHELL):
• Archi has layered vPs
• each functional head has unvalued class features [uCL]
• no multiple Agree with the same controller (DP)
• agreement between heads (cf. Collins 2003, Baker and Willie 2010)

3.1. ARCHI vP

PROPOSAL (IN MORE DETAIL)
• more articulated structure of vP
• auxiliaries are light verbs (v’s)
• each v has [uCL]
• some v’s have case features
• some v’s have aspectual features
• [uCL] can be valued by an internal argument (DPABS) or by v with valued class features
• v heads can be null (cf., null copulas in Arabic, Russian)

ASSUMPTIONS:
• Absolutive is licensed by the lowest v
• Dative, genitive and ergative are inherent cases
3.2. **Proposal: Syntax**

(21) Tor-mi zheq'dij<b>u χ*alli a<b>uli b-it'u.  
    she-ERG self.way<III.SG> bread.III.SG.ABS <III.SG>make III.SG-be.PRS-NEG  
    'She did not bake bread her own way (the way she wanted).'

(22)
QUESTION: how do class exponents end up where they are?

ANSWER: post-syntactic local dislocation
   class features require a host

3.3. PROPOSAL: POST-SYNTACTIC COMPONENT

Distributed Morphology (DM) framework (Halle and Marantz 1993):
   • syntax operates on abstract features
   • morphological operations apply to the output of syntax
   • Vocabulary Insertion follows morphological operations

DM MORPHOLOGICAL OPERATIONS:
   • Fission
   • Fusion
   • Morphological merger (m-merger)

(23) M-MERGER (Marantz 1984, 1988):
   At any level of syntactic analysis (D-structure, S-structure, phonological structure), a
   relation between X and Y may be replaced by (expressed by) the affixation of the lexical
   head of X to the lexical head of Y.

TYPES OF M-MERGER:
   • Lowering/Affix Hopping (Bobaljik 1995)
   • Local dislocation (Embick and Noyer 2001, Embick 2007)

LOWERING/AFFIX HOPPING:
   • Head to head
   • Adjuncts are invisible
   • does not work for Archi ⇨ adverbs can have agreement markers

LOCAL DISLOCATION (LD) IN ARCHI:
   • merger under adjacency (closest specifier)
   • pre-vocabulary insertion and pre-linearization (cf. Embick and Noyer 2001, Embick 2007)

ARCHI LD (at work) (for 22):
   • v1 [IIICL] +V
   • v2[IIICL] +Adverb
   • v3[IIICL] +DPERG
   • v4[IIICL] ⇒ no changes due to an overt auxiliary
POST-VOCABULARY INSERTION:
• [III<CL] → ∅ if there is no host
• [III<CL] is not realized on the host if the host does not have a required morpho-phonological structure

3.4. HOW THE SYSTEM WORKS

(24) Nena<b>u b-is televizor dit:a<b>u mu
1PL.EXCL.ERG<III.SG> III.SG-1.SG.GEN tv.III.ABS quickly<III.SG> be.good
a<b>u.
do-PFV<III.SG>
‘We fixed this TV quickly.’

(25) Syntax

```
VP
  v
    v'
      vP
        v4
          [uCL]

      vP
        v3
          [uCL]

      we
          [ERG/DAT/GEN]

      vP
        v2
          [uCL]

      quickly
          v'
            vP
              v1
                [uCL]

            VP
              v
                [III][ABS]
```

4. "Exuberant agreement" in Other Nakh-Dagestani Languages

Questions:
- Is Archi the only language with "exuberant agreement/exponence"?
- Can the current analysis be extended to other languages with "exuberant exponence"?

Questions and Answers:
- Is Archi the only language with "exuberant agreement/exponence"? **No; it can be found in other Nakh-Dagestani languages.**
- Can the current analysis be extended to other languages with "exuberant exponence"? **Yes.**

4.1. Lak

(27) nit-il q:at-luwun-b-aq čat lawsun b-u-r.
mother-ERG house-OBL-III-ILL bread.III.ABS <III>carry III-AUX-3
‘Mother is carrying bread into the house.’ (Kibrik 2004)
(28) a. Syntax

```
  vP
    v'
      vP v4
      v'
        vP v3
        v'
          DP
           v'
             mother.ERG
               vP v2
               v'
                 into the house
                 v'
                   VP
                     v1
                     [uCL]
                       DP
                        v'
                          bread.III.ABS
                            carry
```

b. Morphology

- \( v_1 [\text{III}] \rightarrow V \)
- \( v_2 [\text{III}] \rightarrow PP \)
- \( v_3 [\text{III}] \rightarrow \text{Erg DP} \rightarrow \emptyset \)
- \( v_4 [\text{III}] \) has a phonologically overt host
4.2. TSAKHUR

(29) ma-m-\textit{mi} sana-b \textit{a-b-i.}  
this.1-A-PL together-HPL HPL-come-PF  
‘They came together.’ (Kibrik et al 1999: 117)

(30) a. Syntax

\[
\begin{array}{c}
\text{vP} \\
\text{v'} \\
\text{vP} \\
\text{v3} \\
\text{[uCL]} \\
\text{v'} \\
\text{vP} \\
\text{v2} \\
\text{[uCL] [PF]} \\
\text{together} \\
\text{v'} \\
\text{vP} \\
\text{v1} \\
\text{[uCL]} \\
\text{DP} \\
\text{V} \\
\text{they} \\
\text{come} \\
\end{array}
\]

b. Morphology
- \text{v1} [\text{III}] \rightarrow \text{V}
- \text{v2} [\text{III}] \rightarrow \text{Adverb}
- \text{v3} [\text{III}] \rightarrow \text{no host} \rightarrow \emptyset

4.3. BATSBI

(31) \text{tiši\textsuperscript{n}} c’\text{a} dah d- ex-d- o d- ano.  
old house (d/d).ABS PV CM-destroy-CM-PRES-CM-EVIDI  
‘They are evidently tearing down the old house.’ (Harris 2009: 268)

(32) Batsbi
- more transparent than other ND languages (it wears its heads on its sleeve)
- relevant heads have overt exponents
- phonology concatenates them into a single phonological word
5. CONCLUSIONS

- agreement exponents provide good evidence for existence of additional $v$ heads, some of which are silent
- these heads license arguments above the absolutive object
- new proposal on multi-layered $vP$ for Nakh-Dagestanian (not specific for Archi)
- each $v$ has $[uCL]$
- $[uCL]$ can be valued by either DPABS or another $v$ with valued class features
- morphological reflexes of class features can be found on DPs, AdvP, and PPs due to a post-syntactic local dislocation
- this analysis dispenses with the notion of “exuberant agreement” and derives a more streamlined syntax of Nakh-Dagestanian $vPs$

REFERENCES


