Realigning alignment: A new take on Jê languages

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1 Alignment typology

- **Alignment** is the grouping of the grammatical functions of *subject* and *object* across *transitive* and *intransitive* clauses.

- Three grammatical functions (GFs):
  - $S^T$ = subject of the transitive clause
  - $S^I$ = subject of the intransitive clause
  - O = object (of the transitive clause)

- Grouping these three grammatical functions gives us five logically possible alignment types that are used in most research on alignment patterns.

1) Standard alignment typology ([Comrie 1978](#)): 
   a. Neutral = all GFs behave the same
   b. Nominative-accusative = The O behaves different from $S^T$ and $S^I$
   c. Ergative-absolutive = The $S^T$ behaves different from $S^I$ and O
   d. Tripartite = All GFs behave differently
   e. Double-oblique = The $S^I$ behaves different from $S^T$ and O (very rare)

- When talking about a language’s alignment system, what is usually looked at are the alignment patterns as manifested in grammatical processes such as *case assignment* and *verbal agreement*.

- For example, with this standard typology we say Dutch is a **nominative-accusative** language, because the agreement patterns and pronominal paradigm are aligned in a **nominative-accusative** way.

2 Applying alignment typology: Jê

- As clear-cut as the five alignment patterns are, when confronted with the full complexity real-world data, it is often not easy to assign an alignment to a language.

- Jê languages pose a particular challenge to the complex patterns of case marking.
  - We are now going to look closely at **Xavante** (Central Jê).

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1. What constitutes a natural class of GFs for a specific language is not a given. For instance, in some languages the set of intransitive subjects is not homogenous. This is often described as an active/inactive system where some S I’s behave the same as S T and some are paired with O. This is the case in e.g. Basque or Georgian ([Comrie 2013a,b; Siewierska 2013](#)).

2. There is also the possibility of $\overline{A}$-movement, discussed in the literature under the header of *syntactic ergativity* ([Coon, Mateo Pedro & Preminger 2014; Polinsky 2014](#)), which traditionally also includes the alignment of syntactic pivots ([Dixon 1994](#)). We do not discuss syntactic ergativity in this paper, but the more fine-grained typology used in this paper is also applicable in the domain of syntactic ergativity.
2.1 Xavante case marking

- In Xavante two alignment systems coexist. In each of the two environments, the morphological mechanisms to index case also differ.

Alignment in main clauses and present tense

- A nominative-accusative alignment of case exponence on pronouns by means of a dedicated paradigm.

(2) a.  
\[ \text{[Wa wi.]} \]
\text{INOM arrive 'I have arrived.' (Estevam 2011: p. 205)}

b.  
\[ \text{[Wa za ti= ö.]} \]
\text{INOM PRO 3ACC take 'I will take it.' (Estevam 2011: p. 177)}

Alignment in dependent clauses, in aorist, negative, and imperative

- An ergative-absolutive alignment of case by means of a dedicated case morpheme.

(3) a.  
\[ \text{E ìì=rada tò wi ?} \]
\text{Q 1SG.ABS grandmother already arrive 'Did my grandmother already arrive?' (Estevam 2009: p. 5)}

b.  
\[ \text{Wapsà [te ìì= ?ræmi ö di.]} \]
\text{dog ERG 1SG.ABS frighten NEG EXPL 'The dog didn’t frighten me.' (Estevam 2011: p. 227)}

c.  
\[ \text{Te ìì= ma ti= nha [ìhi ∅ [te wapari da ]].} \]
\text{3SG.NOM 1SG DAT 3SG say old.man 1SG.ERG ERG listen TRSL 'He tells me to listen to the old man.' (Estevam 2009: p. 5)}

- However, there is a difference between the alignment patterns in (2) and (3) that the standard typology cannot capture.

- This is manifested in the fact that in (2) all GFs participate in the case marking process and have a dedicated pronominal form, while in (3) this is not the case, in fact only the transitive subject participates in the case-marking process.

- This is a difference in completeness of the paradigms that is not represented in the standard alignment typolgy.

3 Realignment

- As seen in the examples above, and as discussed in much recent literature (e.g. Deal 2015; DeLanacy 2004; Queixalós 2013) alignment patterns are rarely as clear-cut as the typology in (1) suggests.

- Lindenbergh & Zwart (To appear) add to this discussion by illustrating that not all grammatical functions necessarily participate in all grammatical processes involved in determining alignment.
### 3.1 Completeness parameter and new typology

- Lindenbergh (2015); Lindenbergh & Zwart (To appear) propose a two-step process in deciding what alignment type a certain grammatical process exhibits:
  1. Decide which elements (GFs) participate.
  2. Align participating elements.

- Following these two steps, Lindenbergh & Zwart (To appear) arrive at a new fine-grained alignment typology, consisting of 18 types in total, with a set of complete and incomplete alignment types, see the table in (4)\(^3\).

(4) **Fine-grained alignment typology**

<table>
<thead>
<tr>
<th>Participating GFs</th>
<th>Alignment of GFs</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>–</td>
<td>NEUTRAL</td>
</tr>
<tr>
<td>(S^T/S^I/O)</td>
<td>(S^T = S^I = O)</td>
<td>IDENTICAL</td>
</tr>
<tr>
<td>(S^T/S^I/O)</td>
<td>(S^T = S^I \neq O)</td>
<td>ACCUSATIVE</td>
</tr>
<tr>
<td>(S^T/S^I/O)</td>
<td>(S^T \neq S^I = O)</td>
<td>ERGATIVE</td>
</tr>
<tr>
<td>(S^T/S^I/O)</td>
<td>(S^T = O \neq S^I)</td>
<td>INTRANSITIVE</td>
</tr>
<tr>
<td>(S^T/S^I/O)</td>
<td>(S^T \neq S^I \neq O)</td>
<td>TRIPARTITE</td>
</tr>
<tr>
<td>(S^T/S^I)</td>
<td>(S^T = S^I)</td>
<td>SUBJECTIVE</td>
</tr>
<tr>
<td>(S^T/S^I)</td>
<td>(S^T &gt; S^I)</td>
<td>TRANSITIVE SUBJECTIVE</td>
</tr>
<tr>
<td>(S^T/S^I)</td>
<td>(S^T &lt; S^I)</td>
<td>INTRANSITIVE SUBJECTIVE</td>
</tr>
<tr>
<td>(S^I/O)</td>
<td>(S^I = O)</td>
<td>ABSOLUTIVE</td>
</tr>
<tr>
<td>(S^I/O)</td>
<td>(S^I &gt; O)</td>
<td>INTRANSITIVE ABSOLUTIVE</td>
</tr>
<tr>
<td>(S^I/O)</td>
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<td>TRANSITIVE ABSOLUTIVE</td>
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<td>SUBJECTIVE TRANSITIVE</td>
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<tr>
<td>(S^T/O)</td>
<td>(S^T &lt; O)</td>
<td>OBJECTIVE TRANSITIVE</td>
</tr>
<tr>
<td>O</td>
<td>–</td>
<td>OBJECTIVE</td>
</tr>
<tr>
<td>(S^T)</td>
<td>–</td>
<td>NARROW ERGATIVE</td>
</tr>
<tr>
<td>(S^I)</td>
<td>–</td>
<td>NARROW INTRANSITIVE</td>
</tr>
</tbody>
</table>

- The standard alignment typology has only 5 logically possible combinations of the three grammatical functions, now we have 18 different types. This provides us with a much better toolkit to look at what is actually happening in languages case and agreement systems.

\(^3\) The different relations between the grammatical functions are ‘\(=\)’, ‘\(\neq\)’, ‘\(<\)/\(>\)’, where ‘\(=\)’ represents identical realization, ‘\(\neq\)’ different realization, and ‘\(<\)/\(>\)’ indicates which of the elements is morphologically more marked.
If we look back at Xavante in (2) and (3) we can now properly classify the different processes:

- **Main clauses:** The pronominal paradigm is **ACCUSATIVE** ($S^T$ and $S^I$ are the same, O is different).
- **Dependent clauses:** Case marking on lexical DP is in fact **NARROW ERGATIVE** (only $S^T$ participates)

### 4 Realigning Jê languages

- Equipped with the fine-grained completeness alignment typology that has proved effective with Xavante, we can approach the entire Jê family.
- The 10 extant Jê languages are spoken in eastern Amazonia, in central and south-eastern Brazil.
- The family is subdivided into three branches:

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(5)  

Jê

<table>
<thead>
<tr>
<th>Northern Jê</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apinayé</td>
</tr>
<tr>
<td>Kisédjê</td>
</tr>
<tr>
<td>Mêbêngôkre</td>
</tr>
<tr>
<td>Panará</td>
</tr>
<tr>
<td>Tapayuna</td>
</tr>
<tr>
<td>Timbira</td>
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<table>
<thead>
<tr>
<th>Central Jê</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xavante</td>
</tr>
<tr>
<td>Xerente</td>
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</table>

<table>
<thead>
<tr>
<th>Southern Jê</th>
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<tbody>
<tr>
<td>Kaingang</td>
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<tr>
<td>Xokleng</td>
</tr>
</tbody>
</table>
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Internal classification of the Jê family. Adapted from *Davis (1966)* and *Rodrigues (1999)*.

- We applied the new typology to all the Jê languages to find out what alignment patterns these languages exhibit.
- In determining alignment patterns we looked at the **pronominal paradigm** and **case on lexical DPs**.4
- Jê languages typically present two verbal forms, a short verbal form and a long nominalized form (*Bardagil to appear; Nonato 2014; Salanova 2007*), so for each environment we determined the alignment patterns.

4. Jê languages have no verbal agreement, so therefore there are no alignment patterns for agreement.
• The results of this research are summarized in the table in appendix I.
• We will now discuss a few languages as examples of applying the typology.

4.1 Northern Jê: Kĩsêdjê

Short form

• *case on lexical DPs: Subjective*

(6) a. ∅ i nã ɾa mbârâ.
FACT 1SG mother NOM cry
‘My mother cried.’ (Nonato 2014: p. 3)
b. ∅ i nã khu= ku.
FACT 1SG mother NOM 3SG.ACC eat
‘My mother ate it.’ (Nonato 2014: p. 3)
c. hẽn ‘wa ‘pen kasó so
FACT 1SG.NOM mangaba suck
‘I sucked on a mangaba.’ (Santos 1997: p. 110)

• *pronominal paradigm: Accusative*

(7) a. ɾa ‘ŋgɛre.
2SG.NOM dance.
‘You danced.’ (Santos 1997: p. 47)
b. tu’te- n ɾa ku= pi.
bow TOP 2SG.NOM 3SG.ACC take
‘You took the bow.’ (Santos 1997: p. 48)

Long form

• *case on lexical DPs: Narrow Ergative*

(8) a. Biãka ngõrõ kere.
Bianca sleepLG NEG
‘Bianca didn’t sleep.’ (Santos 1997: p. 72)
b. Hẽn wa [rop ɾe k= wã ropkásák wymba] atha pi.
FACT 1SG.NOM jaguar ERG 3SG.ABS to dog fearLG DEM kill.SH
‘I killed that jaguar that was afraid of dogs.’ (Nonato 2014: p. 113)

• *pronominal paradigm: Ergative*

(9) a. [i=] ngɛre ] kere
1SG.ABS dance.NF NEG
‘I don’t dance.’ (Santos 1997: p. 66)
b. ire a= kaken kere
1SG.ERG 2SG.ABS scratch.NF NEG.
‘I didn’t scratch you.’ (Santos 1997: p. 161)
4.2 Southern Jê: Kaingang

- For Kaingang we exemplify case on lexical DPs.

Short form

- Associated with something like “active” semantics (Urban 1985)

  - *case on lexical DPs: SUBJECTIVE*

(10) a. Õnsĩ [vũ] vænhva.
    boy NOM run
    ‘The boy ran.’ (Nascimento 2013: p. 8)

b. Õnsĩ [vũ] krêkuľár juján.
    boy NOM fish catch
    ‘The boy caught fish.’ (Nascimento 2013: p. 7)

Long form

- Associated with something like “stative” semantics, embedded clauses (Urban 1985)

  - *case on lexical DPs: NARROW ERGATIVE*

(11) a. [gĩr vænhväg mũ] vũ prêr
    boy run.LG ASP NOM shout
    ‘The boy that ran shouted.’ (Tabosa & Santos 2013b: p. 302)

b. [pũn [tũ] mĩg prãg mũ] vũ pũgreso tãnh
    snake ERG jaguar bite.LG ASP NOM chicken kill
    ‘The snake that bit a jaguar killed a chicken.’ (Tabosa & Santos 2013b: p. 302)

4.3 Northern Jê: Mêbêngôkre

- For Mêbêngôkre we exemplify case as manifested in the pronominal paradigm.

Short form

- Used in main clauses

  - *pronominal paradigm: ACCUSATIVE*

(12) a. [Bã] keke.
    1SG NOM laugh.SH
    ‘I laugh.’ (el)

b. [Bã [a=] pumu].
    1SG NOM 2SG ACC see.SH
    ‘I see you.’ (el)
Long form

- Associated with imperfective semantics, dependent clauses
- pronominal paradigm: ERGATIVE

(13) a. 1SG.ABS laugh.LG NEG 'I don’t laugh.' (el)

b. 1SG.ERG 2SG.ABS see.LG NEG 'I don’t see you.' (el)

5 Conclusion

- By applying the new fine-grained typology (Lindenbergh & Zwart To appear) to the Jê language family, we have shown that the distinction between complete and incomplete alignment systems is a crucial distinction if we want to faithfully capture the true complexity of alignment processes.

- At the same time, the full-fledged alignment typology can be adopted as a guideline for descriptive work, ensuring that the data available for a specific language is sufficient for the level of detail required in linguistic analysis.

- Furthermore, if we look at the results of our research for the entire Jê language family in the table in appendix I, we see a different picture now than if we look at the family through the lens of the classic alignment typology.

  - Applying the completeness typology uncovered a much higher variation between languages than we see manifested in the classic typology column. In the classic typology all the Jê languages appear to behave the same, except for Panará. But we now see that this is actually an artifact of glossing over crucial variation in trying to apply the classic typology.

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The following abbreviations are used in the glosses:
1 = first person, 2 = second person, 3 = third person, ABS = absolutive, ACC = accusative, ASP = aspect, DAT = dative, DEM = demonstrative, ERG = ergative, EXPL = expletive, FACT = factual, LG = long form, NEG = negative, NF = non finite, NOM = nominative, PROSP = prospective, Q = question particle, SG = singular, SH = short form, TOP = topic, TRSL = transitive.
References


