# Logophoricity in Ibibio

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## 1   Ibibio logophors

1· **Pronouns and agreement**

Ibibio has robust agreement morphology for both subject and objects:

(1)  **éwá á**-mà   **á-n**-dɔ́m   **míèn**
     **dog 3SG**-PST **3SG-1SG**-bite **1SG.OBJ**

     'A dog bit me'

|        | Pronouns |        | Agreement |        |
|--------|----------|--------|-----------|--------|
|        | Subject  | Object | Subject   | Object |
| 1sg    | àmì      | míèn   | ń-        | ń-     |
| 2sg    | àfɔ̀     | fíèn   | à-        | ú-     |
| 3sg    | ànyé     | ànyé   | á-        | á-     |
| 1pl    | ɲ̀ɲ̀ìn    |        | ì-        | í      |
| 2pl    | ǹdùfɔ̀   |        | è-        | é-     |
| 3pl    | ɔ̀mmɔ̂   |        | é-        | é-     |
| LOG.SG | ìmɔ̀    |        | ì-        | í-     |
| LOG.PL | m̀mìmɔ̀ |        | ì-        | í-     |

Table 1: Ibibio pronouns and agreement markers

2· **Logophoric agreement**

Logophors (and their accompanying agreement) in Ibibio have morphology completely distinct from the other person markers, as well as being distinct from reflexives.

(2)  a.  Ekpe á-bò   ké (**ìmɔ̀**) **ì**-mà   **í**-tò   Udo
         Ekpe 3SG-say C LOG   LOG-PST LOG-hit Udo

         'Ekpe$_i$ said that he$_i$ hit Udo.'                                    (logophor)

     b.  Ekpe á-bò   ké **ànyé á**-díyɔ̀ŋɔ́   íkwó íkwó ḿfɔ̀nḿfɔ̀n
         Ekpe 3SG-say C 3SG   3SG-know sing  song well

         'Ekpe$_i$ said that he$_{i/j}$ sings well.'                             (pronoun)

     c.  Ekpa á-bó   ké ì-mà   í-tɔ̀   **ídèm**
         Ekpe 3SG-say C LOG-PST LOG-hit self

         'Ekpe$_i$ said that he$_i$ hit himself$_i$'                             (reflexive)

3· **No matrix clauses**

Ibibio logophors are illicit in matrix clauses:

1

(3) * Ekpe á-mà     á-díyà   àdésí **ìmɔ̀**
Ekpe 3SG-PST 3SG-eat rice   LOG.POSS

Intended: 'Ekpe$_i$ ate his$_i$ rice'                                        logophor

(4)   Ekpe á-mà     á-díyà   àdésí **ámɔ̀**
Ekpe 3SG-PST 3SG-eat rice   3SG.POSS

'Ekpe$_i$ ate his$_{i/k}$ rice'                                             pronoun

## 4· Plural logophors

When a plural logophor is used, split antecedence is possible so long as the subject of the closest matrix clause is a subset of the group that the plural logophor refers to.

(5) Ekpe á-bò      ké **m̀mìmɔ̀** ì-díyà    àfɨ́t àdésí ádɔ̀
Ekpe 3SG-say C   LOG.PL   LOG-eat all   rice   DEM

'Ekpe$_i$ says that they$_{\{i,j\}}$ ate all of the rice'

(6) Ekpe á-bò      ké Udo á-kérè     ké èté **m̀mìmɔ̀** á-yà     í-dí      í-wɔ̀
Ekpe 3SG-say C   Udo 3SG-think C   father LOG.PL   3SG-FUT   LOG-come LOG-visit

'Ekpe$_i$ says that Udo$_j$ thinks that their$_{\{i,j\}/\{j,k\}}$ father will come visit.'

## 5· *De se* only

Ibibio logophors obligatorily receive *de se* interpretations, unlike in Ewe (Pearson, 2015). The logophor is only possible when the matrix subject self-ascribes the property in the embedded clause.

> **Context:**    *Ekpe sings on occasion, but will never admit that he is any good. So one time, during one of his performances, you record him without his knowledge. Some time later, you play back the recording to him without telling him who is singing. Ekpe doesn't recognize himself in the recording, and comments "he sings well."*

(7)   Ekpe á-bò      ké **ànyé** á-díyɔ̀ŋɔ́   íkwó íkwó ḿfɔ̀nmfɔ̀n
Ekpe 3SG-say C   3SG   3SG-know sing  song well

'Ekpe$_i$ said that he$_{i/j}$ sings well.'

(8) # Ekpe á-bò      ké **ìmɔ̀** ì-mé      í-díyɔ̀ŋɔ́   íkwó íkwó ḿfɔ̀nmfɔ̀n
Ekpe 3SG-say C   LOG LOG-PRES LOG-know sing  song well

Intended: 'Ekpe$_i$ said that he$_i$ sings well.'

## 6· Potential antecedents: Second person

Second-person antecedents are allowed, but first person is ruled out:

(9)   à-ké      bò   ké (ìmɔ̀) ì-má      í-kót     ŋ̀wèt
2PL-PST say C   LOG   LOG-PST LOG-read book

'You$_i$ said that you$_i$ read a book.'                                      (2SG)

(10) * ŋ́-ké      bò   ké ì-mà      í-kót     ŋ̀wèt
1SG-PST say C   LOG-PST LOG-read book

Intended: 'I said that I read a book.'                                        (1SG)

(11)  è-ké      bò   ké m̀mìmɔ̀ ì-mà      í-kót     ŋ̀wèt
2PL-PST say C   LOG.PL LOG-PST LOG-read book

'You (pl.) said that you read a book.'                                        (2PL)

(12) * ì-ké      bò   ké m̀mìmɔ̀ ì-ma      í-kót     ŋ̀wèt
1PL-PST say C   LOG.PL LOG-PST LOG-read book

Intended: 'We said that we read a book'                                       (1PL)

### 7· **Potential antecedents: Long-distance**

In principle, Ibibio logophors can take antecedents more than one clause away:

(13)  Ekpe á-bò    ké Udo á-ké    á-kérè    ké (ìmɔ̀) ì-ké    í-kít    Ima
      Ekpe 3SG-say C  Udo 3SG-PST 3SG-think C  LOG   LOG-PST LOG-see Ima
      'Ekpe$_i$ says that Udo$_j$ thinks that he$_{i/j}$ saw Ima.'

### 8· **Multiple embedded logophors**

**But**, two clausemate logophors have to take the same antecedent:

(14)  Ekpe á-mà    á-kòp    ké Udo á-ké    á-bò    ké àyín-ékà **ìmɔ̀**    á-mà    á-kít    **ìmɔ̀** ké
      Ekpe 3SG-PST 3SG-hear C  Udo 3SG-PST 3SG-say C  brother  LOG.POSS 3SG-PST 3SG-see LOG at
      údúà
      market
      'Ekpe**$_i$** heard that Udo**$_j$** said that his**$_{j/*i}$** brother saw him**$_{j/*i}$** at the market.'

(15)  * Ekpe á-mà    á-kóp    ké Udo á-ké    á-bó    ké **ìmɔ̀** ì-mà    í-tɔ̀    **ìmɔ̀**
      Ekpe 3SG-PST 3SG-hear C  Udo 3SG-PST 3SG-say C  LOG  LOG-PST LOG-hit LOG
      Intended: 'Ekpe$_i$ heard that Udo$_j$ said that he$_{i/j}$ hit him$_{i/j}$'

### 9· **That's not much like a logophoric language**

Clausemate logophors are free to take different antecedents in Yoruba (Anand, 2006):

(16)  Olu so pé Ade ro    pé bàbá **oun**    ti    r´ɨ `ɨyá    **òun**
      Olu say that Ade think that father oun.gen PERF see mother oun.gen
      'Olu$_i$ said that Ade$_k$ thought that his$_{i/k}$ father had seen his$_{i/k}$ mother.'

And in Ewe (Clements, 1975):

(17)  Kofi xɔ-e        se    be  Ama gblɔ be  **yè**-ƒu    **yè**
      Kofi receive-PRO hear that Ama say  that LOG-beat LOG
      'Kofi$_i$ believed that Ama$_k$ said that he$_i$ beat her$_k$' or
      'Kofi$_i$ believed that Ama$_k$ said that she$_k$ beat him$_i$'

Why can't they in Ibibio?

### 10· **But it is like an indexical-shift language**

Anand & Nevins (2004) report that in Zazaki,[1] which has indexical shift, clausemate indexicals either shift together or not at all:

(18)  vɨzeri     Rojda Bill-ra va  kɛ  **ɜz to**-ra  miradiša
      yesterday Rojda Bill-to said that I   you-to angry.be-PRES

      'Yesterday Rojda said to Bill, "I am angry at you."'
      'Yesterday Rojda said to Bill, "AUTH(c) is angry at ADDR(c)."'
      *'Yesterday Rojda said to Bill, "AUTH(c) is angry at you."'
      *'Yesterday Rojda said to Bill, "I am angry at ADDR(c)."'

This seems similar to the constraint on Ibibio logophors.

## 2   Explaining Shift Together

### 11· **A constraint on shifted indexicals**

Anand (2006) defines the following constraint on indexical shift languages:

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[1]Indo-Iranian, Turkey

(19) Shift Together Constraint
   All shiftable indexicals within an *attitude-context domain* must pick up reference from the same context

  a.  $\mathbf{C}_A \, [ \, \ldots modal \; \mathbf{C}_B \, \ldots [ \, \text{ind}_1^{\mathbf{A}} \, \ldots \text{ind}_2^{\mathbf{A}} \, ]]$
  b.  $\mathbf{C}_A \, [ \, \ldots modal \; \mathbf{C}_B \, \ldots [ \, \text{ind}_1^{\mathbf{B}} \, \ldots \text{ind}_2^{\mathbf{B}} \, ]]$
  c. $* \, \mathbf{C}_A \, [ \, \ldots modal \; \mathbf{C}_B \, \ldots [ \, \text{ind}_1^{\mathbf{A}} \, \ldots \text{ind}_2^{\mathbf{B}} \, ]]$
  d. $* \, \mathbf{C}_A \, [ \, \ldots modal \; \mathbf{C}_B \, \ldots [ \, \text{ind}_1^{\mathbf{B}} \, \ldots \text{ind}_2^{\mathbf{A}} \, ]]$

Descriptively speaking, it doesn't matter how far away the operator that the indexicals depend on is, they just have to depend on the <u>same</u> operator.

## 12· Deriving Shift Together

Anand derives Shift Together in Zazaki and Slave by defining shifting operators that overwrite the context values under attitude verbs:

(20) $[\![ \, \text{OP}_{auth} \; \alpha \, ]\!]^{c,i} = [\![ \, \alpha \, ]\!]^{j,i}$, where j=$\langle \text{AUTH}(\mathbf{i}), \text{ADDR}(\mathbf{c}), \text{TIME}(\mathbf{c}), \text{WORLD}(\mathbf{c}) \rangle$

(21) $[\![ \, \text{OP}_{per} \; \alpha \, ]\!]^{c,i} = [\![ \, \alpha \, ]\!]^{j,i}$, where j=$\langle \text{AUTH}(\mathbf{i}), \text{ADDR}(\mathbf{i}), \text{TIME}(\mathbf{c}), \text{WORLD}(\mathbf{c}) \rangle$

The information for the matrix value of the indexical is lost, ensuring that all of the embedded indexicals take the shifted reading (no 'unshifting').

## 13· Shifting vs. logophors

Logophors, on the other hand, are taken to be bound by a completely different operator, OP-LOG, which is basic $\lambda$-binding. Logophors have a [LOG] feature that requires them to be bound by a coindexed OP-LOG.

## 14· A potential solution

Maybe Ibibio logophors are just logophor-shaped shifted indexicals, derived by a context-overwrite operator. Or maybe Ibibio has both types of operators in its embedded attitude clauses: a shifter to ensure Shift Together, and a binder to ensure that logophors can't appear in matrix clauses.

## 15· The hitch

But (true) indexicals can freely occur in the same clause as logophors:

(22) Ekpe á-kérè  ké (**ìmɔ̀**) ì-mà  í-n-kít  **míèn**
   Ekpe 3SG-think C LOG LOG-PST LOG-1SG-see 1SG.OBJ
   'Ekpe$_i$ thinks that he$_i$ saw me.'

If shifting occurs via contextual overwrite, the embedded first person should be shifted, but it's not.

## 16· Defining pronominals

Schlenker (2003) proposes that shiftable indexicals are defined to shift (potentially optionally) under the right attitude verb.

(23) a. English 'I': +indexical, +c*
  b. Amharic 'I': +indexical, [underspecified]

Schlenker's approach doesn't account for shift together, but combined with Anand's shifting operators, we

## 17· Shifting and binding

In Ibibio, only the logophors are defined to take a shifted context. Indexicals are like English indexicals:

(24) a. $[\![ \, ìmɔ̀ \, ]\!]^{g,c} = \text{AUTH}(c)$              SHIFTABLE
  b. $[\![ \, \text{1SG} \, ]\!]^{g,c} = \text{AUTH}(c^*)$           NOT SHIFTABLE

Anand's AUTH shifter suffices to shift the logophors, and nothing else.

(25) $[\![ \, \text{OP}_{auth} \; \alpha \, ]\!]^{c,i} = [\![ \, \alpha \, ]\!]^{j,i}$, where j=$\langle \text{AUTH}(\mathbf{i}), \text{ADDR}(\mathbf{c}), \text{TIME}(\mathbf{c}), \text{WORLD}(\mathbf{c}) \rangle$

### 18· What about OP-LOG?

Yoruba strong pronouns show the *De Re* Blocking Effect (Adesola, 2005):

(26) Adé$_i$ so pé **oun**$_i$ ti r´$\dot{\text{i}}$ `ìwé **rè**$_{i,j}$
     Ade say that oun PERF see book o-gen

     'Ade$_i$ said that he$_i$ has seen his$_{i,j}$ book.'

(27) Olu$_i$ so pé **o**$_{*i/j}$ r´$\dot{\text{i}}$ bàbá **òun**$_i$
     Olu say that o see father oun-gen

     'Olu$_i$ said that he$_{*i/j}$ has seen his$_i$ father.'

(28) Olu$_i$ so pé bàbá **rè**$_{i/j}$ r´$\dot{\text{i}}$ `ìyá **òun**$_i$
     Olu say that father o-gen see mother oun-gen

     'Olu$_i$ said that his$_{i/j}$ father has seen his$_i$ mother.'

In Anand's (2006) theory, (27) does not allow the weak pronoun to refer to the logophoric center because in cases where it is co-indexed with the logophor, it is a competing binder for the more deeply embedded logophor, causing a condition B effect. This is ameliorated by interrupting c-command between the two pronouns, as in (28).

### 19· *De Re* Blocking is for logophors, not indexicals

> **Context:** *At a friend's party, Hesen is shocked to see Ali, the boyfriend of his good friend Rojda, flirting with a woman in a big red dress and hat that obscures her face. After seeing her kiss Ali, Hesen rushes off to find Rojda. When he finds her, he tells her, "**The woman in the big red dress** kissed your man." Of course, it was Rojda all along, only hidden under a costume!*

(29) Heseni va kʒ Rojdaa layik **tɨya** pach kerd
     Hesen.OBL said that Rojda.OBL boy your kiss did

     'Hesen said (to Rojda$_i$) that Rojda$_i$ kissed her$_i$ man.'           (Anand, 2006, (333))

### 20· *De Re* blocking in Ibibio

Ibibio also shows the *De Re* Blocking Effect, although interestingly it does not seem to be ameliorated by preventing c-command between the two pronouns, as it is in Yoruba:

(30) Ekpe$_i$ á-mà á-bò ké **ìmɔ̀**$_i$ ì-mà í-kɨ́t èté **ámɔ̀**$_{i/j}$
     Ekpe 3SG-PST 3SG-say C LOG LOG-PST LOG-see father 3SG.POSS

     'Ekpe$_i$ said that he$_i$ saw his$_{i/j}$ father.'

(31) Ekpe$_i$ á-mà á-bò ké **ànyé**$_{*i/j}$ á-mà á-kɨ́t èté **ìmɔ̀**$_i$
     Ekpe 3SG-PST 3SG-say C 3SG 3SG-PST 3SG-see father LOG.POSS

     'Ekpe$_i$ said that he$_{*i/j}$ saw his$_i$ father.'

(32) Ekpe$_i$ á-mà á-bò ké èté **ámɔ̀**$_{*i/j}$ á-mà á-kɨ́t èkà **ìmɔ̀**$_i$
     Ekpe 3SG-PST 3SG-say C father 3SG.POSS 3SG-PST 3SG-see mother LOG.POSS

     'Ekpe$_i$ said that his$_{*i/j}$ father saw his$_i$ mother.'

As this effect is derived by binding competition, it would be a mistake to assume that there is no OP-LOG active in Ibibio.

### 21· Results

- Indexical shift is accomplished by a conspiracy of factors

- First, indexicals that are lexically sensitive to a shifting operator

- Second, a operator under an attitude verb to overwrite the contextual parameter for indexicals in its scope

- Ibibio shows that pronominals within a language can vary as to whether they are sensitive to shifting

- The effects of both Shift Together and *De Re* Blocking in the same language illustrate that shifting operators and OP-LOG are not in complementary distribution, and can both be active in the same language.

# 3  Typological implications

22· **Sources of variance**

We now have a new way for languages to vary, predicting an expanded typology:

- The presence (and type) of shifting operator(s) in the language

- The presence of logophoric binding operators

- What pronominals are defined as shiftable

23· **Some variation we won't see**

- In order for shifted indexicals (or logophoricity) to appear, there has to be a conspiracy between the pronominals and the relevant operators

- A language that has shiftable indexicals but no shifting operators is indistinguishable from a language without shiftable indexicals (whether that language has a shifting operator or not)

24· **The typology**

|  | No Logophors | Logophors | |
|---|---|---|---|
|  |  | **Shiftable** | **Unshiftable** |
| **No Shifted Indexicals** | English | Ibibio | Ewe[2],Yoruba[3] |
| **Shifted Indexicals** | Zazaki[4] | Aghem?[5] | |

25· **Summary**

- Ibibio logophors show hybrid behavior for *de se* elements: In some ways they are well-behaved logophors and in some ways they are like shifted indexicals.

- This behavior can be captured with the minimal adjustment that indexical shift requires not only an operator in the left periphery, but also that the indexicals themselves must be defined to shift.

- Ibibio logophors can then be defined as (essentially) shifted indexicals that are also bound by logophoric operators, distinguishing them from 'true' Ibibio indexicals, which do not shift.

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