

## Anaphora in the African Languages

### Questionnaire Response for Yorùbá, Ọyọ́/Ibàdàn dialect – Version 2.2

The dialect reported on is the Ọyọ́/Ibàdàn dialect of Yorùbá, which is spoken in Nigeria (Ethnologue code YOR).

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## PART 2 An inventory of reflexive and reciprocal strategies

### 2.1 Coreference in a single clause

#### 2.1.1 "Primary" reflexive strategy -

A1) A reflexive is usually formed with: Ara + (genitive) Pronoun **ara-X**

#### Strategy

- a. Olú rí ara rẹ̀  
Olu see body his  
'Olu saw himself.'

The **ara-X Strategy** is very productive in Yoruba. All you have to do is to change the genitive pronoun for different persons and numbers.

NOTE: A subset of what is used as reflexives is also used as a reciprocal: body + plural genitive pronouns. Here is an example with the 3<sup>rd</sup> person plural pronoun.

b. Wón fẹran ara wọn  
they love body them  
'they love each other'

The form: ara wọn is also used as a reflexive in the language

b' Wón fẹran ara wọn  
they love body them  
'they love themselves'

### 2.1.2 Is there another way, or ways, to express coreference in A1

It is also possible to use an accusative pronoun as a reflexive in a yes-no question. This is more or less limited to **the second person singular accusative pronoun.**      **Strategy B**

a. O ò rí ọ bí (equivalent to: O ò ri ara rẹ bí  
You NEG see you QM                      You NEG see body you QM  
'Can you see yourself?'                      'Can you see yourself?'

\* Can you see you'

NOTE: the use of any other accusative pronoun in the position of the second person singular pronoun as in (2) can only give a non-reflexive reading. This suggests that strategy B is not productive.

### 2.1.3 Other verb types -

A2a) (a). Olú fá irungbòṅ  
 Olu shave beard  
 'Olu shaved' (Olu shaved himself)

The use of the "reflexive form" with the transitive verb: *fá* 'shave' in (a) might have a fairly different connotation.

a'). Olú fá irungbòṅ ara rẹ  
 Olu shave beard body his  
 'Olu shaved his own beard'

b. Olú gé ara rẹ (ní ọ̀bẹ̀)  
 Olu cut body his ? knife  
 'Olu cut himself (with a knife)'

c. Ojú ti Adé  
 eye push Ade  
 'Ade is ashamed' ('Ade is ashamed of himself')

The example in (a) suggests that ' fá 'shave' is different from *wẹ̀* 'bathe'.

d. Olú wẹ̀ **null object strategy**  
 Olu bathe  
 'Olu washed himself'

For *wẹ̀*, it is possible to use the reflexive form. (Low toned verbs become mid toned verbs before an object NP in Yoruba language.)

B. Olú wẹ ara rẹ  
Olu bathe body his  
Olu washed himself

In general, the use the **null object strategy** is not productive

#### 2.1.4 Obliques and other argument types

i) Olú gbókàn lé ara rẹ  
Olu put-heart upon body his  
'Olu counted on himself'

ii) Olú rí ejò ní ègbé ara rẹ  
Olu see snake at side body his  
'Olu saw a snake near himself'

A3a) Olú sọrọ sí Adé  
Olu say-word (talk) to Ade  
'Olu spoke to Ade

b) Olú sọrọ nípa ara rẹ  
Olu talk about body his  
Olu spoke about himself

c) Olú sọrọ fún Òjọ nípa ara rẹ  
Olu talk to Ojo about body his  
'Olu spoke to Ojo about himself'

c') Olú sọrọ (nípa) ara rẹ fún Òjọ (*nípa* is optional here)  
Olu talk (about) body his to Ojo

'Olu spoke to Ojo about himself'

d) Olú bá wa sòrò nípa ara wa  
Olu meet us talk about body our  
'Olu spoke to us about ourselves'

e) Olú fún àwọn ọmọ náà fún 'raawọn  
Olu give they child the for- body- their  
'Olu gave the children themselves'

f) Olú rí ìwé lẹ̀hìn rẹ̀  
Olu see book at-back him  
'Olu saw a book behind him'

g) Olú ra ìwé náà fúnraa rẹ̀  
Olu buy book the for-body-his  
'Olu bought the book for himself'

A4a) Ọ̀jọ̀ fẹ́ran ara rẹ̀  
Ojo like body his  
Ojo likes himself'

b) Ọ̀jọ̀ dáyà já ara rẹ̀  
Ojo break-chest break body his  
Ojo scares himself'

c) Ọ̀jọ̀ n' fo ara rẹ̀ láyà  
Ojo PROG jump body his at-chest  
'Ojo is worrying himself'

c) Adé ñ fòró ara rẹ  
Ade PROG. trouble body his  
'Ade is troubling himself'

### 2.1.5 Person and number

A5a) Mo rí ara mi  
I see body my  
'I saw myself'

b) Ó sèèsì gé ara rẹ (ni òbẹ)  
You accidentally cut body you ? knife  
'You accidentally cut yourself (with a knife)'

c) A óò wẹ ara wa  
We will bathe body our  
'we will wash ourselves'

d) Ẹ gbòdò ran ara yín lówó  
You(pl.) must carry body you (pl.) at-hand  
'You must help yourselves'

### 2.1.6

A6a) Pétérù mọ ara rẹ  
Peter know body his  
'Peter knows himself'

b) Pétérù máa ñ ka àlèébù ara rẹ nígbà gbogbo  
Peter HAB. PROG. count fault body his at time all

'Peter (habitually) criticizes himself'

c) Ó     ṣeéṣe                    kí            Pétérù yin    ara rẹ  
It possible/likely    COMP    Peter    praise body his  
'Peter is likely to praise himself / it is likely/possible for Peter to praise himself'

(b) Do quantificational constructions involve a separate strategy?

NO

A7a) Ọmọkùnrin kọ̀ọ̀kan    wo    ara    rẹ  
Boy            each-one look    body his  
'Every boy looked at himself.'

b) Gbogbo obìnrin ṣàpèjúwe Olú fún ara wọn  
all            woman describe Olu to body their  
'All the women described Olu to themselves.'

b') Olùkọ̀ kọ̀ọ̀kan fi    ara    rẹ    han    Ọ̀jọ̀  
Teach each    use    body his show Ojo  
'Every teacher introduced himself to Ojo.'

b") Àwọn ọmọ kan ran ara wọn nìkan lówó  
They child one carry body their    only    at-hand  
'Some children only help themselves.'

(c) grammaticized honorifics

Bàbá    Olú rí    ara wọn  
Father Olu see    body their  
'Olu's father saw himself'

A8) Wọn rí ara wọn.

they see body them

"*They saw themselves.*" or "*They saw each other.*" or "*They saw their bodies.*"

CORRECT as given.

(d) tensed complements, subjunctives, infinitivals, purpose clauses, or any other embedding construction your language

A9a) Sọlá sọ pé Áliisì fẹran ara rẹ

Sola say that Alice like body her

'Sola says that Alice loves herself.'

b) Sọlá rò pé Áliisì gbòdò yin ara rẹ

Sola think that Alice must/should praise body her

'Sola thought Alice should praise herself.'

c) Sọlá ní kí Áliisì yin ara rẹ

Sola say COMP Aliisi praise body his

'Sola asked Alice to praise herself.'

d) Sọlá fẹ yin ara rẹ

Sola want praise body his

'Sola wants to praise himself.'

e) Sọlá fẹ kí Áliisì yin ara rẹ

Sola want COMP Aliisi praise body his

Sola expects Alice to praise herself.



- f) Ṣoḷá gbọ́ ti Álìsì n̄ yin ara rẹ̀  
 Sola hear COMP Aliisi PROG. praise body his  
 ‘Sola heard Alice praising herself.’

## 2.2 Ordinary (potentially independent) pronouns

### 2.2.1

- A10a) Mo bá Adé sọ̀rọ̀ ní ànà. Ó rí Òjọ̀  
 I meet Ade talk at yesterday. He see Ojo  
 ‘I spoke with Ade yesterday. He saw Ojo.’

- b) Adé dà? Mo rí i ní ojà  
 Ade where I see him at market  
 ‘Where is Ade? I saw him in the market.’

- c) A rí ọ̀. Ṣé o rí mi/wa  
 We see you QM you see me/us  
 ‘We saw you. Did you see me/us?’

2.2.2 If your language has more than one type of pronouns (e.g., null, clitic and non-clitic pronouns, tonic, or stressable pronouns, etc.), list each type with examples.

	Strong Pronouns		Weak pronouns		
	NOM/ACC	GEN	NOM	ACC	GEN
1 <sup>st</sup> Singular	èmi	èmi	mo	mí	mi
2 <sup>nd</sup> Singular	ìwọ̀	ìrẹ̀	o	ọ̀/ẹ̀	rẹ̀
3 <sup>rd</sup> Singular	òun	irè/oun	ó	un / V	rẹ̀
1 <sup>st</sup> Plural	àwa	àwa	a	wá	wa
2 <sup>nd</sup> Plural	ẹ̀yin	ẹ̀yin	ẹ̀	yín	yín
3 <sup>rd</sup> Plural	àwọ̀n	àwọ̀n	wọ̀n	wọ̀n	wọ̀n

Note: V = vowel

### 2.2.3 Null arguments

a). Olú kò lọ  
Olu NEG go  
'Olu didn't go'

a') Kò lọ  
NEG go  
'he did not go'

b.) Olú yóò lọ  
Olu will go  
'Olu will go'

b'.) Yóò lọ  
will go  
'he will not go'

Only the third person singular (weak) pronoun is **required** to be null before negation and future tense markers in Yoruba.

## 2.3 Reciprocal coreference

### 2.3.1

a. Wọ̀n rí ara wọ̀n      **Strategy D (it's a subset of the ara-X Strategy )**  
they see body their  
'they saw each other' 'they saw themselves' 'they saw their bodies'

### 2.3.2

A11a) Àwọn obìnrin náà rí ara wọn

They woman the see body their

'The women see each other.'

b) Àwọn ọmọkùnrin náà wẹ ara wọn

They boy the wash body their

'The boys washed each other.'

c) Àwọn ọkùnrin náà ya irun ara wọn

They man the comb hair body their

'The men combed each other's hair.'

d) Wọn bá ara wọn jiyàn

They meet body their argue

'They argued with each other.'

e) Àwọn ọmọkùnrin náà gba ara wọn

they boy the kick body their

'The boys kicked each other.'

f) Wọn kóríra ara wọn

they hate body their

'They hate each other.'

2.3.3 Oblique arguments - Continue looking for new reciprocal strategies with the following sentences:

A12a) Àwọn ọkùnrin náà fi Ọjó han ara wọn

They man the use Ojo show body their

'The men introduced Bill to each other.'

b) Àwọn arinrinàjò náà sọrọ sí ara wọn  
they travelers the talk to body their

'The travelers spoke to each other.'

c) Àwọn àlùfáà náà gbọ̀ iròyìn nípa ara wọn  
they priests the hear news about body their

'The priests heard news about each other.'

d) Wọn fi ẹ̀bùn sí iwájú ara wọn  
they put gift at front body their

'They left presents in front of each other.'

#### 2.3.4 Other persons and numbers

A13a) A rí ara wa  
We see body our

'We saw each other.'

b) Ẹ gbọ̀dò ran ara yín lówó  
you must carry body your at-hand

'You(pl.) must help each other.'

c) A óò wẹ ara wa  
we will wash body us

'We will wash ourselves.'

d) Gbogbo ìgbà ni wọn máa ń tọka àlèébù sí ara wọn  
all time be they HAB. PROG. point-finger fault to body their

'They always criticize each other.'

- e) Ọ̀pòlọ̀pọ̀ ọ̀mọ̀kùnrin gbá ara wọn (ní ẹ̀sẹ̀)  
Many boy kick body their ? box  
'Many boys kicked each other.'

2.3.5 Other clause types, and other strategies: Use the following sentences as models, but if there is nothing new to be found this way, do not bother to translate them and move on.

*There is nothing new.*

- A14a) Sol says that the girls love each other.  
b) Sol required that the girls praise each other.  
c) Sol thought the girls should praise each other.  
d) Sol asked the girls to praise each other.  
e) The girls want to praise each other.  
f) Sol expects the girls to praise each other.  
g) Sol heard the girls praising each other.

## 2.4 Other types of local coreference

### 2.4.1 Possessives, alienable and inalienable

The **ara-X Strategy** could be used for (b, c and d) but not common for (a). In addition a null genitive pronoun could also be used for (a to d)

- A15a) Olú ju bàtà rẹ̀ nù  
Olu throw shoes his lost  
'Olu lost his shoes.'

b) Olú na ọwọ rẹ sókè  
Olu beat hand his to-mountain  
'Olu raised his hand.'

c) Olú (fi ọbẹ) gé ọwọ \_ null genitive pronoun  
Olu use knife cut hand  
'Olu cut his hand (with a knife).'

c') Olú (fi ọbẹ) gé ọwọ rẹ  
Olu use knife cut hand his  
'Olu cut his hand (with a knife).'

c") Olú (fi ọbẹ) gé ọwọ ara rẹ  
Olu use knife cut hand body his  
'Olu cut his hand (with a knife).' (or Olu cut his own hand

d) Pọ̀ọ̀lù yẹ ọwọ wò null genitive pronoun  
Paul remove hand look  
'Paul examined his hand.'

d') Pọ̀ọ̀lù yẹ ọwọ rẹ wò  
Paul remove hand his look  
'Paul examined his hand.'

d") Pọ̀ọ̀lù yẹ ọwọ ara rẹ wò  
Paul remove hand body his look  
'Paul examined his hand.'

2.4.2 Reflexives in nominals - Some languages use a different affix or form to establish a reflexive relationship inside of a nominal. Identify any strategies that can apply to nouns rather than verbs. (Other possibilities: self-destruction, self-help, etc.)

A16) Andrew's self-**confidence** annoyed Mary.

A17) Ìfira-ẹni-hàn                      Olú wu              olùkọ náà  
Using-body-person-show    Olu impress teacher the

'Olu's introduction of himself impressed the teacher.'

2.4.3 Something we haven't thought of? - Please bring to our attention any other sort of local coconstrual between arguments of a predicate that you think is relevant.

None

### Part 3 General details about the strategies

It may be easier for you (and us) if you complete part 3 of the questionnaire for one strategy at a time. Begin with the first strategy you have identified (Strategy A, for example), and answer all questions as they apply to it. Then return to this point and do the same with strategy B, etc.

Some questions refer to the current strategy, meaning whichever strategy you are providing an answer for at that moment.

### 3.1 Marking

#### 3.1.1

As of now, we have identified four strategies, out of this, we assume that strategy D (reciprocal) is a subset of Strategy A (reflexive). None of the strategies require a special morphology on either the noun or the verb in any context of reflexive marking. Furthermore, there is no (overt) morpheme that could be use to differentiate the use of the *BODY + plural genitive pronouns* as reflexives from when they are used as reciprocal.

The use of the second person singular weak pronoun as a reflexive is restricted to yes-no question context but it does not require any special morphology otherwise.

Only a closed set of verbs allow the null reflexive but they do not require any special morphology either (some of the verbs e.g *fa* 'shave' remain transitive . In general, Yoruba does not allow any arguments to be dropped in order to derive a co-construal reading.

## 3.2 Productivity

### 3.2.1 How productive is this strategy

The use of Strategy A: BODY + genitive Pronoun, is extremely productive in Yoruba. The use of strategies B (second person singular pronoun) and C (null reflexive) are not productive. However, strategy C is more productive that strategy B. We assume that strategy D (reciprocal) is a subset of strategy A and is productive.

### 3.2.2 Is the use of this strategy lexically restricted to certain verb classes, or is it unrestricted (applies across all verb classes)?

The use of strategies A and D is not restricted to any class of verbs. They could be used with almost all the verbs. Strategy C (null reflexive) can be used with



only a small number of verbs.

### 3.3 Context of Use

#### 3.3.1 How marked or natural is this strategy?

Strategies A to D are very natural. They can be used in any context. Recall though that strategies B and C have a limited use depending on the verb and the structure of the sentence. Note also that the use of honorific is cultural.

Is special intonation or emphasis necessary?

No special intonation is required for any of the strategies.

Is a particular discourse context (e.g., contradicting) necessary?

Not really.

B1) If Marsha admires just one person, then, I suspect that she admires just HER.

Yoruba would use a reflexive in the position of HER in B1. None of the pronouns (weak/strong) can occur in the position.

i) Bí ó bá jẹ pé èniyàn kan péré ni Sádé fẹràn, a jẹ pé ara rẹ ni

If it meet be that person one only be Sade like, it be that body his be

'If Sade likes just one person, then it's herself'

The use of the second person singular weak pronoun as reflexive in examples

such as (a) repeated below does not require any special intonation. Of course Yoruba does not have stress.

- a. O ò rí ọ bí (equivalent to: O ò rí ara ẹ bí )  
You NEG see you QM                      You NEG see body you QM  
'Can you see yourself?'                      'Can you see yourself'  
\* Can you see you'

3.3.4 Do you have any other comments on the use or meaning of this strategy, or on how it differs from other strategies you have identified? (Before you answer, take a look at the questions asked in the following sections).

### 3.4 Morphology

There is no morpheme for 'self' in Yoruba. Also, as mentioned earlier, Yoruba does not put any affix on the verbs neither does it use any special form of NP arguments in reflexive marking. The basic structure of the reflexive as given above is:

ara 'body' + genitive pronoun e.g. ara mi (body my) 'myself'

The forms used as reciprocal constitute a subset of the reflexive thus they have the same structure. The only thing is that only the reflexives that have plural genitive pronouns can be used as reciprocals.

3.4.1 Does the reflexive element, in its entirety, have a stateable lexical translation?

Yes, it has a stable translation: (body + genitive pronoun) e.g my body, his body, her body, their bodies, our bodies, your body, your bodies etc.

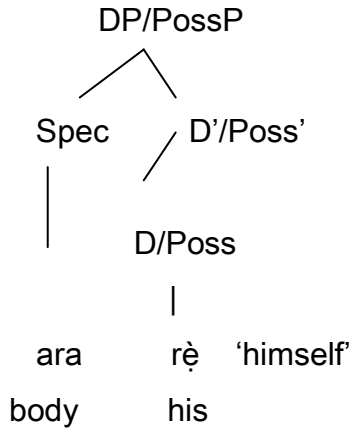
(Only the plural forms are used in reciprocals but they do not have any morpheme that indicates “other”)

3.4.2 If the term used as a reflexive or reciprocal can be used for a non-reflexive/non-reciprocal meaning, is it an ordinary noun that can be possessed by other pronouns? Is it some form of prepositional phrase or adjective? Is there anything further to say about its meaning in such cases?

- a. Ó fọwọ kan ara rẹ  
he use-hand touch body his  
'he touched himself'  
'he touched his body'
- b. Ó fọwọ kan iwé rẹ  
he use-hand touch book his  
'he touched his book'

There is no significant difference between when the forms are used as reflexives and when they are used as genitive NP. Actually, it could be said that the reflexive forms are a subset of the genitive NPs in the language. They have the same structure as the infinite number of genitive phrases in the language. The forms have a reflexive meaning only when 'body' is the object that is possessed.

3.4.3 If the reflexive element has clear syntactic and part-of-speech sub-structure (e.g., head and modifiers, determiners, possessives) show it here.



Agreement features etc.

The reflexive must agree in person and number with the NP it depends on. (the agreement on number is relaxed in case of honorific). No agreement morpheme is required/used.

(b) Does this morpheme have a lexical meaning? Is it clearly or plausibly related to a lexically contentful word or morpheme? Give details as necessary.

No special morpheme is used/required. Each of the two morphemes that make up a reflexive is an independent word in the language. The constant morpheme *ara* 'body' is a regular word in the language. A genitive pronoun is used with it depending on the person and number features of the NP that binds the reflexive.

### 3.5 The agreement paradigm

Give the morphological paradigm of each reflexive strategy.

Yoruba does not mark gender.

- a) Orí i rẹ  
 Head it/his/her 'his/it/her head'

b) *ara a rẹ*

body it/his/her 'himself, itself, herself' ('its body, her body, his body')

Yoruba does not have a plural morpheme either. The pronouns' number specification is marked by using different morphemes for the singular and plural pronouns. E.g.

B2

the third person singular pronoun is *rẹ* as in *ara rẹ* 'himself, itself, herself'

the third person plural pronoun is *wọn* as in *ara wọn* 'themselves'

the second person singular pronoun is *rẹ* as in *ara rẹ* 'yourself'

the second person plural pronoun is *yín* as in *ara yín* 'yourselves'

the first person singular pronoun is *mi* as in *ara mi* 'myself'

the first person plural pronoun is *wa* as in *ara wa* 'ourselves'

The pronouns that occur with *ara* 'body' are homophonous with the pronouns that are used in possessive NPs. Only weak pronouns can occur with *ara* 'body' to derive a reflexive reading.

Yoruba has no morphemes for case marking. The possessive NPs are assumed to have a genitive case that is assigned to the possessor.

### 3.6 Interaction with verb morphology

3.6.1 If you are aware of operations or morphemes that cannot co-occur with this strategy, then list them here, providing an example and a brief statement of what the incompatible morphemes or constructions are.

There is no restrictions on the morphemes that could be used with the reflexive in

Yoruba. (There is no passivization in the language though)

Exploration: Potential incompatibilities

No **obvious** incompatibilities

3.6.2.1 Tense, Mood, Aspect - Make an inventory of the tense, mood and aspect system of your language.

Yoruba marks only the future and the non-future tense. The non-future tense has no obvious overt morpheme (a). Most researchers assume that it is the **High Tone Syllable** as in (b). But the HTS cannot occur with the weak nominative pronouns (c).

a. Adé jẹ̀ ìrẹ̀sì  
Ade eat rice  
'Ade ate rice'

b. Sùlè é jẹ̀ ìrẹ̀sì  
Sule HTS eat rice  
'Sule ate rice'

c. Ó jẹ̀ ìrẹ̀sì  
he eat rice  
'he ate rice'

The future tense morpheme depends on whether the sentence is affirmative or negative.

*Affirmative:*

d) Yóò / á 'will'

Negative:

e) Kò níí (in short níí is the negative future tense marker)

NEG will 'will not'

f. Adé yóò jẹ ìrẹ̀sì

Ade will eat rice

'Ade will eat rice'

f' . Adé Kò níí jẹ ìrẹ̀sì

Ade NEG will eat rice

'Ade will not eat rice'

## ASPECT

(a) ti 'has'

(b) á maa 'usually will ...'

(c) a ti maa 'usually will ...'

(d) maa n 'usually is .../ was...'

(e) ti maa 'will have...'

(f) ti n' 'has/had been ...'

(g) n PROGRESSIVE

(h) kií 'usually don't'

## MOOD

(a) yóò 'shall/will'

- (b) *máa* 'shall/will'
- (c) *gbòdò* 'must/should'
- (d) *lè* 'can'
- (e) *níí* *will not*
- (f) *máà* 'do not'
- (g) *ì bá* 'would have'
- (h) *ì báà* 'even if'

Check whether the various forms are compatible with the current coreference strategy. Check with at least the following verbs.

B3) see, praise, help, like, know, wash

They are compatible with all the co-reference strategies.

3.6.2.2 GF-changing - Make a list of GF-changing constructions or operations in your language that affect the argument structure of a verb, adding, promoting, or demoting arguments. For example, passive, antipassive, stative, benefactive, applicative, etc.

Yoruba does not have passive, applicative or antipassive constructions. It has no morpheme that marks benefactive. It is not obvious to me that the argument structure of the verb can change in stative constructions. Yoruba uses a form of ergative construction though but this does not interact with anaphora in any interesting way

- (a) *Olú fọ àwo*  
*Olu break plate*  
 'Olu broke a plate'



(a') Àwo fọ  
plate break  
'the plate boke'

B4) cook, give, visit, kill

Not applicable

### **Non-coreference uses**

Yoruba reflexives are used for co-reference purposes only.

3.7.1 Idiosyncratic. Some languages have verbs that lexically require a reflexive, which does not appear to correspond to an argument.

Not applicable

3.7.2 Emphatic or intensifier.

a) Ààrẹ́ fúnrarẹ́ ni ó gbé fòònù  
president for-body-his be he carry phone  
'The president himself answered the phone.'

3.7.3 Middle.

It appears that Yoruba does not have middles. The constructions that are probably close to English middles have nothing to do with reflexivization.

i) Mọtò yíì dùn ún wà  
Moto this sweet drive  
'It's easy to drive this car'

The above sentence is different from expletive constructions

- ii) Ó rọ̀rùn látí wá mọ̀tò yíí  
It easy to drive motor this  
‘It is easy to drive this car’

### 3.7.4 Distributive, sociative, etc.

Not applicable

3.7.5 Deictic use - If the current strategy involves a nominal form (e.g., English himself) Can this form be used when the antecedent is physically present or otherwise prominent, but has not been mentioned (such that X does not refer to Bill or Mary)? (Suggest a context if necessary).

No. **Ara rẹ̀** has to refer to either Bill or Mary in (B5).

B5a) Bìlìlì kò rí ara rẹ̀  
Bill NEG see body his  
Bill did not see himself

b) Şé Màríà fẹ̀ràn ara rẹ̀  
QM Mary like body her  
‘Does Mary like herself’

c) \*Ara rẹ̀ lo sí ojà ní ànà  
body his go to market at yesterday  
*for ‘Himself went to the market yesterday.’*

Can this form be used to refer to one of the participants in the conversation who

is not otherwise mentioned in that sentence?

No. **Ara rẹ** has to refer to *Bill* in (B6).

B6a) Bìlì láálí ara rẹ  
Bill insult body his

Bill insulted himself. (\*ara rẹ = speaker, \*ara rẹ = addressee)

b) \*Òpò èniyàn kò fẹràn Alóńgẹ, sùgbón ara rẹ fẹràn wọn  
many people NEG like Alonge but body his like them

For: *Many people do not like anchovies, but X likes them.*

(\*ara rẹ = speaker, \*ara rẹ = addressee)

Can the form in question be used in a sense like that of English generic one (which is not evenly acceptable for English speakers in non-subject environments). Or is there a meaning that means "arbitrary person". There are otherwise local anaphors in Hindi, for example, that can have the latter usage.

No, **ara rẹ** must refer to the local subject (i.e. the third person pronoun **he**) in (B7a)

B7a) N kò fẹ bí ó ẹ n' sọrọ sí ara rẹ  
I NEG. like the-way he use PROG speak to body his  
'I don't like the way he speaks to himself.'

b) \*Ara rẹ kò lè sọra jù  
Body his NEG can watch-body too-much  
For: *One cannot be too careful*

3.7.6 Other.

None

### 3.8 Proxy readings

One interpretation that the choice of coreferent strategy is sometimes sensitive to is proxy interpretation. A proxy reading is one where the coreferent argument is understood as a representation of or a "stand in" for the reference of the antecedent. This is often the case with statues, for example, or authors and their work.

Usually, a noun (indicating the object) will occur before the reflexive in this context in Yoruba (b). Perhaps, the best possible case that would not need a noun would be if someone sees himself in a mirror (a).

(a) Olú ñ yòmbó ara rẹ  
Olu PROG exalt body his  
'Olu is praising/ admiring himself'

B8 b) Olú sàyésí ère ara rẹ ni ilé ohun ìṣẹ̀mbáyé  
Olu honor statue body his at house thing from-creation  
'Olu honors/admires the statue of himself in the museum'

The differences emerge in English for cases like B9. Imagine that the wax museum is having a special event, which the wax statues of each celebrity will be washed and dressed by the celebrity they represent.

B9a) Olú rọra wẹ ara rẹ kí amọ náà má ba à bàjé  
Olu carefully wash body his COMP clay the NEG damage  
'Olu washed himself carefully, so as not to damage the clay.'

b) \* Olú rọra wẹ kí amọ náà má ba à bàjẹ  
 Olu carefully wash COMP clay the NEG damage  
 ‘Olu washed carefully, so as not to damage the clay.’

c) Olú rọra wọ ara rẹ lásọ kí amọ náà má ba à bàjẹ  
 Olu carefully wear body his in-dress COMPclay the NEG damage  
 ‘Olu dressed himself carefully, so as not to damage the clay.’

d) \* Olú rọra wọ asọ kí amọ náà má ba à bàjẹ  
 Olu carefully wear dress COMP clay the NEG damage  
 ‘Olu dressed carefully, so as not to damage the clay.’

The judgments for English in these cases is that the null strategy in B9b,d, possible for the verbs dress and wash normally, are not acceptable here, at least not in the intended sense. While B9d permits a reading that the movie star dressed her own person, not her statue, in a way that does not damage the wax, it does not mean that she dressed the statue, a reading possible for B9c. In the case of B9b, there is a reading for which Castro did some non-specific washing, perhaps of the statue, in a way that does not damage the wax, but it does not have the more specific reading that Castro washed the statue of him that B9a has.

Test for proxy readings in your language and see if there are instances where they are possible and others where they are not. Proxy readings do not require locality, so cases like B10 are also generally possible.

B10a) Olú sọ pé ìwé òun dùn ún kà ledèè Sùwàhìlì  
 Olu say that book his sweet read in-language Swahili  
 Olu says he sounds better in Swahili. (he = Olu’s writings)

b) Olú rò pé òun ẹwà

Olu think that he beautiful

Olú thought that he looked handsome. (he = statue of Olú)

Provide both local and long distance examples with gloss and translation of proxy readings. If proxy readings seem difficult for you to get just say so, and if you find that you need to transform the examples in some way to get the right interpretation, feel free to do so, but then be extra careful about gloss and translation.

#### PART 4 Exploration of syntactic domains

Use the following symbols for grammaticality judgements. You do not have to employ all of them for any given paradigm.

ok = Perfect

? = A bit odd, but acceptable

?\* = Pretty bad

\* = Unacceptable

\*\* = Word jumble

X1a)\* Òjó gbá

Ojo kick

b) Òjó gbá ara ẹ

Ojo kick body his

'Ojo hit himself.'

c)\* Àwọ̀n ọ̀mọ̀kùnrin gbá

they boy kick

d) Àwọn ọmọkùnrin náà ní gbá ara wọn  
they boy the PROG kick body their  
'The boys were kicking each other.'

e) Àwọn ọmọkùnrin náà ní gbá ara wọn  
they boy the PROG kick body their  
'The boys were kicking one another.'

f)\* Olú gbá a  
Olu kick him (where Olu = him)

Remarks: *Example X1c is not possible with any interpretation, reciprocal or reflexive. The IMPLICIT strategy is limited to certain verb classes, as mentioned in section 2.1.3. There is no separate/distinct morpheme for one another in Yoruba. It's same with each other.*

Now suppose that the verb chosen had been wash. As a native Yoruba speaker, I would respond as follows.

X2a) Olú wẹ  
Olu bathe  
'Olu washed.'

b) Olú wẹ ara rẹ  
Olu bathe body his  
'John washed himself.'

c) Àwọn ọmọkùnrin náà wẹ  
they boy the bathe

'The boys washed.'

d) Àwọ̀n ọ̀mọ̀kùnrin náà wẹ ara wọ̀n  
they boy the bathe body their

'The boys washed each other.'

e) Àwọ̀n ọ̀mọ̀kùnrin náà wẹ ara wọ̀n  
they boy the bathe body their

'The boys washed one another.'

f)\* Olú wẹ ẹ  
Olu bathe him

Remarks: *Examples X2a and X2b contrast, although the difference is unclear to me. You could say John washed himself clean, but not \*John washed clean. I am not sure why.*

Both are possible in Yoruba. This could be because Yoruba allows serial verbal constructions

a) Olú wẹ ara rẹ mọ  
Olu bathe body his clean

'Olu washed himself clean'

(b) Olú wẹ mọ  
Olu bathe clean

'Olu washed clean' (bad in English)

*Example X2c can have a reflexive interpretation like X2a, but X2c is \* if it is intended to have a reciprocal reading like X2d or X2e. The implicit (null) strategy,*



*as mentioned in section 2.1.3, is limited to verbs of grooming, etc., so I will not test it further with verbs it is not compatible with.*

Okay.

Can the possessive of an argument of the main predicate (verb in this case) be represented by one of the coreference strategies that we have identified as holding between coarguments.

X3a) Olú rí ìyá ara rẹ  
Olu saw mother body his  
'Olu saw the mother of himself.' (good in English?)  
'Olu saw his own mother'

b) \* Olú wẹ ìyá  
Olu bathe mother

c) Olú àti Òjọ rí ìyá ara wọn  
Olu and Ojo see mother body their  
'Olu and Ojo saw their own mother'  
'Olu and Ojo saw each other's mother.' (degraded in English)  
'Olu and Ojo saw each other's mothers.'

(Here, unlike in English, there is no contrast between singular and plural forms in Yoruba.)

d) Olú àti Òjọ rí ìyá ara wọn  
Olu and Ojo see mother body their  
'Olu and Ojo saw their own mother'  
'Olu and Ojo saw one another's mother.' (somewhat bad in English)  
'Olu and Ojo saw one another's mothers.'

(Here, unlike in English, there is no contrast between singular and plural forms in Yoruba.)

e) Olú àti Òjọ rí ìyá wọ̀n  
Olu and Ojo see mother their  
'Olu and Ojo saw their mother'

f) Olú rí / wẹ̀ ìyá rẹ̀  
Olu see / bathe mother his  
'Olu washed/saw his mother.'

Ordinarily, the example in (b) is not ungrammatical (with the reading: X washes Y). However, it does not have a reflexive reading.

#### 4.1 Clausemate coconstrual

The following questions will provide a broad outline of the types of predicates that allow the use of each strategy.

##### 4.1.1 Verb class restrictions

4.1.1.1 Canonical transitives - Can this strategy be used with ordinary transitive verbs, such as the verb meaning "see"? Give some examples, including the following.

C1a) \* Olú rí  
Olu see

a') Olú rí ara rẹ̀ Olú rí ara rẹ̀ láì gbé díní  
Olu see body his Olu see body his without carry mirror  
'Olu saw himself' (i.e. in a mirror) 'Olu saw himself without using a mirror'

= Olu has known his limitations

a”) \* Olú rí i

Olu see him (bad as a reflexive: Olu saw himself)

b) \* Àwọn obìnrin ṣàpèjúwe

They woman describe

b') Àwọn obìnrin ṣàpèjúwe ara wọn

They woman describe body their

'The women described themselves'

'The women described their bodies'

'The women described each other'

'The women described one another'

c) \* È gbá

You kick

c') È gbá ara yín

You kick body your

'You(pl.) kicked yourselves.'

'You kicked each other'

'You kicked one another'

'You kicked your bodies'

d) \* Wọn yìn

they praise

d') Wọn yìn ara wọn

they praise body their

'They praised themselves'

'they praised each other'

4.1.1.2 Commonly reflexive predicates - Can this strategy be used with verbs of grooming, inalienable-possession objects, etc? Give judgements on the following. Provide some additional examples of your own.

C3a) Olú wẹ  
Olu bathe  
Olu washed himself'

a') Olú wẹ ara rẹ  
Olu bathe body his  
'Olu washed his body'  
'Olu washed himself'

b) \* Olú gé  
Olu cut

b') Olú gé irun rẹ  
Olu cut hair his  
'Olu cut his hair'

b'') Olú gé irun ara rẹ  
Olu cut hair body his  
'Olu cut his own hair'  
'Olu cut his hair by himself'

b''') Olú gé irun fúnra rẹ  
Olu cut hair for-body-his

'Olu cut his own hair'

'Olu cut his hair by/for himself'

b'') \* Ọmọ̀bìnrin náà gé  
girl the cut

c') Ọmọ̀bìnrin náà gé ara rẹ̀ (ní ọ̀bẹ̀)  
girl the cut body her ? knife  
'the girl cut herself (with a knife)'

4.1.1.3 Psychological predicates. Please provide examples for verbs like those below, even if nothing exact seems appropriate for the current strategy, marking them according to the level of their acceptability based on the scale given above.

C4a) \* Olú kóríra

Olu hate

*For 'Olu hates himself'*

a') Olú kóríra ara rẹ̀  
Olu hate body his  
'Olu hates himself'  
'Olu hate his body'

b) \* Ojú tì

eye close

*for 'he is ashamed of himself'*

b') Ojú tì Olú  
eye close Olu  
'Olu is ashamed'

'Olu is ashamed of himself

c) \* Olú n' dààmú nípa  
Olu PROG. trouble about

c') Olú n' dààmú nípa ara rẹ  
Olu PROG trouble about body his  
'Olu is worrying about himself'

d) \* Olú n' fi yangàn  
Olu PROG use proud

d') Olú n' fi ara rẹ yangàn  
Olu PROG. use body his proud  
'Olu is proud of himself'

e) \* Olú tẹ lórùn  
Olu lay at-neck

e') Olú tẹ ara rẹ lórùn  
Olu lay body his at-neck  
'Olu pleased himself'

4.1.1.4 Creation and destruction. Provide examples in addition to C5 using verbs of creation (e.g., "sew", "make", "form") or destruction (e.g. "kill", "eliminate", "make disappear").

C5a) \* Àwọ̀n obìnrin náà yóò parun  
They woman the will destroy  
'the women will destroy themselves'

(good as 'the women would be destroyed')

a') Àwọn obìnrin náà yóò pa ara wọn run  
they woman the will kill body their finish  
'The women will destroy themselves

b) \*iṣẹ̀ ẹ̀  
work do  
(good as "the work is done" = something strange has happened)

b) Iṣẹ̀ ẹ̀ ara rẹ̀  
work do body its  
'work did itself' = a lot of work was done

4.1.1.5 Verbs of representation. Reflexive versions of these verbs include instances where individuals act on their own behalf, rather than have someone act in their name or for them.

C6a) \* Àwọn ọmọkùnrin ọ́jù  
They boy represent

a') Àwọn ọmọkùnrin náà ọ́jù ara wọn  
they boy the represent body their  
'The boys represented themselves.'

b) \* Olú sọ̀rò fún  
Olu talk for

b') Olú sọ̀rò fún ara rẹ̀  
Olu talk for body his  
'Olu spoke for himself'

'Olu spoke to himself'  
'# Olu spoke to his body'

#### 4.1.2 Argument position pairings

4.1.2.1 Subject-indirect object - The preceding questions asked mostly about subject-object coreference. Can this strategy be used to express coreference between a subject and an indirect object? Choose verbs that have an indirect object in your language.

C7a) Àìná ra èbùn fún ara rẹ  
Aina buy gift for body her  
'Aina bought a gift for herself'

a') Olú bu òwò fún ara rẹ  
Olu cut respect for body his  
'Olu respects himself'

For comparison, also provide judgements for the following:

C8a) Àìná fún ara rẹ ní èbùn  
Aina give body her ? gift  
'Aina gave herself a gift'

a') Olú fi ara rẹ han àwọ̀n àlejò  
Olu use body his show they visitor  
'Olu introduced himself to the visitors'

#### 4.1.2.2 Oblique arguments

C9a) Olú n' sọ̀rọ̀ sí ara rẹ



Olu PROG talk to body his  
'Olu is talking to himself'

a) Olú sòrò fún Adé nípa ara rẹ  
Olu talk to Ade about body his  
'Olu spoke to Ade about himself' (*ara rẹ could be either Olu or Ade  
but not*

*any other person*)

The verb *kilò* 'to warn' also works like the verb *sòrò* 'to talk' in (C9a').

4.1.2.3 Subject-adjunct - Provide some examples of coreference between a subject and an adjunct, e.g., a locative PP. If appropriate translations are not prepositional objects, try to construct appropriate examples.

C10a) ? Òjò rí ejò ní ègbé ara rẹ  
Ojo see snake at side body his  
'Olu saw a snake besides himself'

more common /natural as:

a) Òjò rí ejò ní ègbé rẹ  
Ojo see snake at side his  
'Olu saw a snake besides him'

b) Àdió pè mí nítorí ọ̀rò kan tí Adé gbọ nípa ara  
rẹ

Adio call me because word one COMP Ade hear about body his  
'Adio called me because of something that Ade heard about himself'  
(This sentence is very bad if *ara rẹ* = *Àdió*)

c) Àdió sáré lọ bá Màrià nítorí ọ̀rọ̀ ara rẹ̀  
 Adio run go meet Mary because case/issue/word body his  
 'Olu ran to Mary because of himself'

(This sentence could be uttered in a situation where there is an X, X=Adio and there is a Y, Y=Maria and X ran to Y because X needs Y's help)

4.1.2.4 Ditransitives and double complements- Can the strategy be used to indicate coreference between the two non-subject arguments of a verb?. If there is more than one way to express the two non-subject arguments of a verb like "give", give examples for each type of construction. In English, for example, we would want examples both of the type "show Hal the book" and "show the book to Hal." (where X = Hal for C11a-d). For example, for (C11c), Bill gave Hal himself, which is admittedly pragmatically awkward, but imagine for (C11a) that Mary is showing Hal his image in the mirror - imagine Hal had never seen a mirror before.

Ditransitives –

C11a) ? Olú fi Adé han ara rẹ̀ (ara rẹ̀ = Olu/Ade)  
 Olu use Ade show body his  
 'Olu showed Ade to himself'

more natural as:

b) Olú fi ara rẹ̀ han Adé (ara rẹ̀ = Olu)  
 Olu use body his show Ade  
 'Olu introduced himself to Ade'  
 'Olu showed himself to Ade'

- c) Olú fi Ṣadé fún ara rẹ (ara rẹ = Olu, not Sade)  
 Olu use/give Sade for body his  
 'Olu gave Sade to himself'
- d) Olú fi ara rẹ fún Ṣadé (ara rẹ = Olu)  
 Olu use/give body his to Sade  
 'Olu gave himself to Sade'

4.1.2.5 Two internal arguments or adjuncts - Consider coreference between two arguments of adjunct NPs in the same clause, neither of which is a subject.

C12a) Olú kilò fún Adé nípa ara rẹ  
 Olu warn for Ade about body his  
 'Olu warned Ade about himself' (ara rẹ = Olu/Ade)

b) Olú kilò nípa ara rẹ fún Adé  
 Olu warn about body his to Ade (ara rẹ = Olu but not Ade)  
 'Olu warned Ade about himself'

4.1.2.6 Possessives - Give examples based on the following sentences, and/or by constructing analogous examples from reflexive sentences from the previous sections. For each of C13 and C14, X = Nick.

**Ara rẹ** can be replaced with the simple pronoun **rẹ** in the following examples. Either of them refers to the same antecedent. In each case, the simple pronoun **rẹ** is more preferable/natural than **ara rẹ**. Furthermore, whereas the simple pronoun can have another antecedent different from the subject NP e.g. **Olu** in (C13), it is impossible for **ara rẹ** to have a different antecedent other than the subject NP.

C13a) Olú kóríra iyá ara rẹ (*with emphasis or surprise*)

Olu hate mother body his  
'Olu hates his own mother'  
'?Olu hates the mother of himself' (bad in English I presume)

b) Olú ya irun ti ara rẹ  
Olu comb hair of body his  
'Olu combed his own hair'  
'Olu combed the hair of himself' (bad in English?)

c) Olú bá ògá ti ara rẹ sọrò  
Olu meet boss of body his talk  
'Olu spoke with his own boss'  
'Olu spoke the boss of himself'

d) Olú fi ìwé e ti ara rẹ sí inú ilé  
Olu put book of body his to stomach house  
'Olu put his own book in the house'  
'Olu put the book of himself in the house' (bad in English)

e) Ọba fún Olú ni ẹ̀bùn ní abúlé ara rẹ  
King give Olu ? gift at village body his  
'the king gave Olu a prize in his own village'  
'the king gave Olu a prize in the village of himself' (bad in English)

In (C13e), **ara rẹ** = Ọba/ Olú

f) Àwọn ọmọkùnrin náà fọ ojú ti ara wọn  
They boy the wash eye of body their  
'The boys washed their own face'  
'The boys washed faces of themselves'

C14a) \*Babá Olú máa n' sayésí ara rẹ  
 Father Olu usually PROG honor body his  
 \* Olu's father admires himself. (with himself = Olu)

b) \*Ìrètí Olú pa ara rẹ run  
 hope Olu kill body his finish  
 \*Olu's hope destroyed himself

c) \*ìyá Olú ta káà ara rẹ  
 mother Olu sell car body his  
 \*Olu's mother sold himself's car.

4.1.2.7 Demoted arguments - Refer back to the list of grammatical function-changing operations (such as passive, antipassive, applicative, possessor ascension, dative alternation) that you constructed for section 3.6 (if you did that). For each one, construct some representative non-reflexive examples. Then apply each coreference strategy to various pairs of arguments and report their grammaticality status.

Example: The following sentences have been passivized. If your language has passive, construct reflexive and non-reflexive versions of each one as above.

C15a) Polly was praised by X

b) Polly was helped by X

c) Little is known by Polly about X (X = Polly)

Not applicable

### 4.1.3 Properties of antecedents

#### 4.1.3.1

C16a) Mo fẹràn ara à mi.

I like body my

'I like myself'

b) A fẹràn ara wa

We like body our

'we like ourselves'

'we like each other'

c) O fẹràn ara à rẹ

You like body your

'You like yourself'

d) Ẹ fẹràn ara a yin

You (pl.) like body your(pl.)

'You (pl.) like yourselves'

e) Ó fẹràn ara rẹ

he like body his

'he likes himself'

f) Wọ̀n fẹràn ara wọ̀n

They like body their

'they like themselves'

Repeat with the following sentences, or other suitable examples from section 4.1.1.

C17a) Mo wẹ

I bathe

'I washed myself'

a) Mo wẹ ara à mi  
I bathe body my  
'I washed myself'  
'I washed my own body'

b) \*Mo kóríra  
I hate  
*For: 'I hate myself'*

b') Mo kóríra ara à mi  
I hate body GEN my  
'I hate myself'

c) \*Mo sọ̀rò fún Adé nípa  
I talk to Ade about

c') Mo sọ̀rò fún Adé nípa ara à mi  
I talk to Ade about body GEN my  
'I talked to Ade about myself'

d) Mo rí ejò kan légbẹ́ ara mi  
I see snake one at-side body my  
'I saw a snake beside myself'

e) I am liked by X. *no passivization*

f) ?\* Mo fò̀nù ìyá ara à mi  
I telephone mother body GEN my

'I telephoned the mother of myself'

More natural as:

f) Mo fòonù      iyá      à      mi  
I telephone mother GEN my  
'I telephone my mother'

g) \* Bàbá      mi      fẹ̀ràn      ara      mi  
father my likes body my  
\*My father likes myself

4.1.3.2 Animacy or humanity- If animacy plays a role in choice of strategy or if a strategy is restricted to human (or metaphorically human) entities, please give examples showing both success and failure of the strategy in a way that illustrates the difference.

C18a) Iṣé      ṣe      ara      rẹ      ní      ibẹ̀ yẹn

Work do body his at there

Literarily: Work did itself there (bad in English I presume.)

This sentence implies that '**a lot of work was done at a place**' It doesn't have a literal meaning.

b) Èrọ      náà      ba      ara      rẹ      jẹ  
machine the ? body his ?

'The machine destroys itself (e.g., after you use it)

Note: **bà...jẹ** is a *splitting verb meaning damage/destroy*

In general, Yoruba does not mark animacy



4.1.3.2 Pronoun types - If your language has more than one class of subject pronouns (e.g., clitic and non-clitic), repeat the tests of the previous section for each type. Also repeat for null pronouns, if applicable.

Not applicable

4.1.3.4 Quantifiers - Provide judgements for the following sentences.

C19a) Obìnrin kòòkan rí ara rẹ  
Woman each see body her  
'Every woman saw herself'

a') \* Obìnrin kòòkan rí  
Woman each see

b) Ọmọ kòòkan wẹ  
child each bathe  
'every child washed'

b') Ọmọ kòòkan wẹ ara rẹ  
child each bathe body his  
'every child washed himself'

c) \*Akékòọ kòòkan kóríra  
student each hate

c') Akékòọ kòòkan kóríra ara rẹ  
student each hate body his  
'Every student hates himself'

d) \* Ọmọ kòòkan rí ejò

child each see snake (bad as a reflexive)

- d') Ọmọ kọ̀ọ̀kan rí ejò ní ẹ̀gbé ara rẹ  
child each see snake at side body his  
'Every child saw a snake besides himself'

- e) \* Ọmọ kọ̀ọ̀kan fọ̀nù ìyá  
child each telephone mother (bad as a reflexive)

- e') Ọmọ kọ̀ọ̀kan fọ̀nù ìyá ara rẹ  
child each telephone mother body his  
'every child telephoned his own mother'  
'every child telephoned the mother of himself'

(the 2<sup>nd</sup> interpretation is bad in English, probably not natural in Yoruba either)

- f) \* Bàbá ọ̀mọ kọ̀ọ̀kan fẹ̀ràn ara rẹ  
father child each likes body his  
\*Every child's father likes himself. (where himself = child)

- f') Bàbá ọ̀mọ kọ̀ọ̀kan fẹ̀ràn rẹ  
father child each likes his  
'Every child's father likes him'

- g) Obìnrin kankan kò rí ara rẹ  
Woman none NEG see body her  
'No woman saw herself'

- g') \* Obìnrin kankan kò rí  
Woman none NEG see

- h) Ọmọ kọ̀ọ̀kan kò wẹ

child none NEG bathe  
'No child washed'

h') Ọmọ kankan kò wẹ ara rẹ  
child none NEG bathe body his  
'No child washed himself'

i) \* Akẹkọọ kankan kò kóńra  
student none NEG hate

i') Akẹkọọ kankan kò kóńra ara rẹ  
student none NEG hate body his  
'No student hates himself'

j) \* Ọmọ kankan kò rí ejò  
child none NEG see snake (bad as a reflexive)

j') Ọmọ kankan kò rí ejò ní ẹgbẹ ara rẹ  
child none NEG see snake at side body his  
'No child saw a snake besides himself'

k) \* Ọmọ kankan kò fòònù ìyá  
child none NEG telephone mother (bad as a reflexive)

k') Ọmọ kankan kò fòònù ìyá ara rẹ  
child none NEG telephone mother body his  
'No child telephoned his own mother'  
'No child telephoned the mother of himself'

(the 2<sup>nd</sup> translation is bad in English, probably not natural in Yoruba either)

l) \* Bàbá ọmọ kankan kò fẹràn ara rẹ

father child none NEG likes body his  
\*No child's father likes himself. '

l') ?? Bàbá ọmo □ kankan kò fẹràn rẹ  
father child none NEG likes his  
'?\*No child's father likes him'

#### 4.1.3.5 Questioned antecedents -

C20a) \*Ta ni ó rí  
Who be he see  
Bad with the reading ' who saw himself'

a) Ta ni ó rí ara rẹ  
who be he see body his  
'who saw himself'

b) Ta ni ó wẹ  
who be he bathe  
'Who washed'

b') Ta ni ó wẹ ara rẹ  
who be he bathe body his  
'Who washed himself'

c) \*Ta ni ó rí ejò légbẹ ẹ  
who be he see snake at side

c') Ta ni ó rí ejo légbẹ **ara rẹ** (can use **ara rẹ** or **rẹ** here)

who be he see snake at side body his  
'Who saw a snake beside himself'

d) \*Ta ni ó fòònù ìyá  
who be he telephone mother

d') Ta ni ó fòònù ìyá ara rẹ (can use **ara rẹ** or **rẹ** here)  
who be he telephone mother body his  
'Who telephoned his own mother'  
'who telephone the mother of himself' (bad in English)

d') Ta ni ó fòònù ìyá rẹ  
who be he telephone mother his  
'Who telephoned his mother'

e) \*Bàbá ta ni ó fẹràn  
father who be he like (bad as a reflexive)

e') \*Bàbá ta ni ó fẹràn ara rẹ  
father who be he like body his  
'Whose father likes himself' (bad when himself = who)

e') Bàbá ta ni ó fẹràn rẹ  
father who be he like his  
'Whose father likes him'

#### 4.1.3.6 Reverse binding -

C21a) \*Ara rẹ rí Olú  
Body his see Olu

b) \*Ara wa rí wa  
body us see us

c) \*Ara rẹ rí ejò ní ègbé Olú  
body his see snake at side Olu

d) \*Ara rẹ wú Olú lórí  
body his swell Olu head  
\*himself impressed Olu'

e) \* Adé sọrọ sí ara rẹ nípa Olú  
Ade talk to body his about Olu

\*Ade spoke to himself about Olu. (himself = Olu)

g) X was praised by Fred. *No passivization*

h) X is liked by you. (X = you) *No passivization*

If the current strategy permits a possessive position to be coreferent with its antecedent, please indicate if an anaphor or a pronoun is possible in the position of X, which should correspond to George in all of these examples.

C22a) \* Ó fònù ìyá Olú  
He telephone mother Olu

'\*He telephoned Olu's mother.' (he = Olu)

a') \*Ara rẹ fònù ìyá Olú  
Body his telephone mother Olu

'\*Himself telephoned Olu's mother.' (himself = Olu)

b) \* ìyá rẹ̀ fẹ́ ran Olú lówọ̀  
mother his want carry Olu at-hand  
'\*His mother wanted to help Olu.' (his = Olu)

b') \*ìyá ara rẹ̀ fẹ́ ran Olú lówọ̀  
mother body his want carry Olu at-hand  
' \*the mother of himself wanted to help Olu.'

c) \*ìyá rẹ̀ dààmú Olú  
mother his trouble Olu  
'His mother worried/impressed Olu.' (his = Olú)

c') \*ìyá ara rẹ̀ dààmú Olú  
mother body his trouble Olu  
'the mother of himself worried Olu.'

d) \*Màrià sọ̀rọ̀ fún ìyá rẹ̀ nípa Olú  
Mary talk to mother his about Olu  
'\*Mary told his mother about Olu.' (his = Olu)

d') \*Màrià sọ̀rọ̀ fún ìyá ara rẹ̀ nípa Olú  
Mary talk to mother body his about Olu  
'\*Mary told the mother of himself about Olu.'

e) \* fọtò ìyá rẹ̀ ré lu Olú  
picture mother his fall upon Olu  
'A picture of his mother fell on Olu.'

Good as:

e') fọtò iyá rẹ ré lù ú  
picture mother his fall upon him  
'A picture of his mother fell on him.' (his = him)

e'') \* fọtò iyá ara rẹ ré lu Olú  
picture mother body his fall upon Olu  
'\*A picture of the mother of himself fell on Olu.

f) \* fọtò iyá rẹ wu Olú  
picture mother his please Olu  
'A picture of his mother pleased Olu'

Good as:

f') fọtò iyá rẹ wù ú  
picture mother his please him  
'A picture of his mother pleased him'

f'') ?? fọtò iyá ara rẹ wu Olú  
picture mother body his please Olu  
'\*A picture of mother of himself pleased Olu'

#### 4.1.4 Some matters of interpretation

##### 4.1.4.1 Distribution, reflexivity and reciprocity -

C23) Àwọn obìnrin náà ran ara wọn lówó  
They woman the carry body their in-hand  
'The women helped themselves.'  
'The women helped each other'



'The women helped one another'

Note: Each other and one another have no morphological differences in Yoruba.

Which of the following meanings can this example have? Say which it can have and which it can't have.

- C24a) Each woman helps all (or almost all) of the women, excluding herself. [✓]  
b) Each woman helps all of the women, including herself. [✓]  
c) Each woman helps at least some of the other women. [✓]  
d) Each woman helps herself. [✓]  
e) The women together as a group help the women together as a group. [✓]

Translate each of the following examples, which are compatible with collective action, and state their possible interpretations as above.

- C25a) Àwọ̀n obìnrin náà yin ara wọ̀n  
They woman the praise body their  
'the women praised themselves'  
'the women praised each other'  
'the women praised one another'  
'each woman in the group praised every group member including herself'
- b) Àwọ̀n obìnrin náà yóò tí ara wọ̀n lẹ̀hìn  
they woman the will push body their at-back  
'the women will support themselves'  
'the women will support each other'  
'the women will support one another'  
'each woman in the group would support the member of the group'
- c) Àwọ̀n obìnrin náà yà fọ̀tò ara wọ̀n

they woman the draw photo body their  
'The women photographed themselves.'  
'the women photographed each other'  
'the women photographed one another'

d) Àwọ̀n obìnrin náà da ara wọ̀n  
they woman the pour body their  
'The women betrayed themselves.'  
'The women betrayed each other'  
'the women betrayed one another'

The **ara-X** strategy permits both the reflexive and the reciprocal readings.

Strategy B (second person singular pronoun) permits only a reflexive reading in a restricted context

The **null object** strategy permits only a reflexive reading with a few verbs.

Strategy D (reciprocal) is a subset of the **ara-X** strategy.

4.1.4.2 Reciprocal readings - Complete this section only if your strategy allows a reciprocal reading. If the strategy is ambiguous, make sure to use verbs that allow the reciprocal interpretation.

a) Which of the following verbs can the strategy be applied to?

C26) "meet", "see", "fight", "speak", "hit"      The **ara-X** strategy and  
Strategy D

apply to **all** the verbs

**E.G.**

a) Àwọ̀n obìnrin náà pàdé ara wọ̀n  
they woman the meet body their  
'The women met themselves.'  
'The women met each other'  
'the women met one another'

b) Àwọ̀n obìnrin náà na ara wọ̀n  
they woman the beat body their  
'The women hit themselves.'  
'The women hit each other'  
'the women hit one another'

b) Does the strategy allow the following constructions?

C27) Olú rí ara rẹ̀ pẹ̀lú Òjọ ní ojú àlá  
Olu see body his with Ojo in eye dream  
'Olu saw himself with John in a dream'  
Olu saw X with Ojo (Meaning: "Olu and Ojo saw each other.") **NO**

c) Is there any contrast between C28a and C28b with respect to the acceptability of reciprocal interpretation? If so, tell us what you think the problem is and provide pairs like these for subsequent tests in this section (and let us know if male/female gender pairings introduce any complications).

**None**

**No gender marking**

C28a) Olú àti Màríà yin ara wọ̀n  
Olu and Mary praise body their  
'Olu and Mary praised themselves'

'Olu and Mary praised each other'  
'Olu and Mary praised one another'

- b) Àwọn obìnrin náà yin ara wọn  
They woman the praise body their  
'the women praised themselves'  
'the women praised each other'  
'the women praised one another'

d) Can the strategy express reciprocity between a subject and an indirect object?

- C29a) Olú àti Màrià sọrọ fun ara wọn  
Olu and Mary talk to body their  
'Olu and Mary spoke to themselves'  
'Olu and Mary spoke to each other'  
'Olu and Mary spoke to one another'

- b) Olú kílọ́ fún àwọn obìnrin náà nípa ara wọn  
Olu warn for they woman the about body their  
'Olu warned the women about themselves'  
'Olu warned the women about each other'

- c) Olú àti Màrià ra ìwé fún ara wọn  
Olu and Mary buy book for body their  
'Olu and Mary bought books for themselves'  
'Olu and Mary bought books for each other'  
'Olu and Mary bought books for one another'

e) Long-distance reciprocal readings - For any of the strategies that permit a reciprocal reading, can the following sentence be translated to mean "Bill thinks

he likes Mary, and Mary thinks she likes Bill"? **YES**

C30) Bîlì . àtì Màríà rò pé wọn fẹ̀ràn ara wọn  
Bill and Mary think that they like body their  
'Bill and Mary think that they like each other'

#### 4.2 Cross-clausal binding

In languages like English, the X-SELF strategy can be used to relate the thematic subject of a subordinate clause to the subject of the immediately higher one, as in X4.

X4) John expects himself to win. **Not possible with a reflexive**  
Olú ñ níretí pé òun yóò borí  
Olu PROG. have-hope/expect that he will cover-head  
'*Olu* expects that *he* would win'

X5) Olú ní kǐ á mú kǐ o sọ̀rọ̀ daradara nípa òun  
Olu say COMP we take COMP you talk good about him  
"*Olu* asked us to try to get you to talk nicely about *him*."

X6) Olú sọ̀ pé Òjọ̀ fẹ̀ràn ọ̀mọ̀bìnrin tí ọ́ fẹ̀ òun  
Olu say that Ojo likes girl that she marry him  
"*Olu* said that Ojo loves the girl that married *him*"

Other languages have forms that appear to require an antecedent can find their antecedent across almost any sort of higher tensed clause, as in Chinese.

X7) Olú sọ̀ pé Àdió máa ñ tọ̀ka àlèébù sí òun nígbà  
gbogbo  
Olu say that Adio HAB. Point-finger fault to him at-time all  
"*Olu* says that Adio often criticizes *him*."

#### 4.2.1 Coreference relations across typical tensed clausal complement

X8) Olú sọ pé Mária fẹràn òun (logophoricity)  
Olu say that Maria like him  
*Olu* said that Mary loves *him*. (*him* = *Olu*)

X8') Olú sọ pé Mária fẹràn rẹ  
Olu say that Maria like him  
*Olu* said that Mary loves *him*. (*him* = *Olu* or somebody else)

For more on **logophoricity**, see the questionnaire on logophoricity which will be posted on this web site soon. For now, it suffices to note that the strong pronoun **òun** is required to take **Olu** as its antecedent in (X8). Also, note that it is impossible to use **ara òun** instead of **òun** in (X8).

In what follows, please be careful to use verbs compatible with the strategy you are testing, as determined by your answers earlier in the questionnaire. If the strategy does not permit a subject argument to be marked, please try to formulate what it would look like and mark it unacceptable according to the strength of your judgment.

4.2.1.1 Tensed complement, long distance relations, anaphor in situ - Please provide translations for all of these sentences where X is Jack.

D1a) \* Olú sọ pé ara rẹ gbọn  
Olu say that body his wise

a') Olú sọ pé òun gbọn  
Olu say that he wise  
'Olu said that he is smart.

a")\* *Olú* mò pé Adé fẹ̀ràn *ara rẹ̀*  
Olu know that Ade like body his

b') *Olú* mò pé Adé fẹ̀ràn *òun*  
Olu know that Ade like body his  
'Olu knows that Ade likes him'

c) \* *Olú* mò pé Adé sọ pé *ara rẹ̀ gbọ̀n*  
Olu know that Ade say that body his wise

c') *Olú* mò pé Adé sọ pé *òun gbọ̀n*  
Olu know that Ade say that he wise  
'Olu knows that Ade said that he is smart.'

d) \* *Olú* rò pé Adé mò pé Àdìó fẹ̀ràn *ara rẹ̀*  
Olu think that Ade know that Adio like body his

d') *Olú* rò pé Adé mò pé Àdìó fẹ̀ràn *òun*  
Olu think that Ade know that Adio like him  
'Olu thinks that Ade knows that Adio like him'

e) \* *Olú* rò pé Adé mò pé *ara rẹ̀ fẹ̀ràn Àdìó*  
Olu think that Ade know that body his like Adio

e') *Olú* rò pé Adé mò pé *òun fẹ̀ràn Àdìó*  
Olu think that Ade know that he like Adio  
'Olu thinks that Ade knows that he loves Adio'

f) \* *Séérà* sọ fún Jáàkì pé Lísà fẹ̀ràn *ara rẹ̀*  
Sarah talk to Jack that Lisa like body his

f) *Séérà* sọ fún Jáàkì pé Lísà fẹ̀ràn *òun*  
Sarah talk to Jack that Lisa like her  
'Sarah told Jack that Lisa loves her.'

g) \* *Séérà* sọ fún Jáàkì pé *ara rẹ̀* fẹ̀ràn Lísà  
Sarah talk to Jack that body his like Lisa

g') *Séérà* sọ fún Jáàkì pé *òun* fẹ̀ràn Lísà  
Sarah talk to Jack that he like Lisa  
'Sarah told Jack that he loves Lisa.'

D2a) *Olú* gbà pé Màríà fẹ̀ràn *òun*  
Olu accept that Mary likes him  
'Olu admitted that Mary loved him.'

b) *Olú* fura pé Màríà fẹ̀ràn *òun*  
Olu suspect that Mary likes him  
'Jack suspected that Mary loved him'.

Please also test adjuncts, such as those in (D3), where X = Jeff.

D3a) ?? *Olú* fi ẹ̀hónú hàn nípa Màríà nígbà tí Àdió dá *òun*  
lẹ̀bi

Olu put protest show about Mary when C Adio break him at-guilt

a') *Olú* fi ẹ̀hónú hàn nípa Màríà nígbà tí Àdió dá *a*  
lẹ̀bi

Olu put protest show about Mary when C Adio break him at-guilt



'Olu complained about Mary when Adio blamed him'

b) Olú padà sí ilé nígbà tí ó rẹ é  
Olu return to house when C it tire him  
'Jeff returned home when he became tired'.

c) \* Nígbà tí Olú kòwé sí i , Adé padà wálé  
when C Olu write to him, Ade return to-house

(When/before/after Mary wrote to X, Jeff returned home.)

d) Olú kúrò láí jẹ kí Mára rí òun  
Olu leave without allow C Maria see him  
'Olu left without Mary seeing him.'

NO reciprocal is possible here.

There is no gender distinction in Yoruba.

Person difference does not change the pattern.

#### 4.2.1.2 Climbing from tensed complements -

It does not look like Yoruba allows small clauses like the one in this sentence:

"John believes [himself intelligent.]" The closest acceptable sentence is given in (a) below. (Structurally, it looks like a simple sentence in Yoruba.)

a) Olú ka ara rẹ sí ọlọgbón  
Olu count body his to wise-person  
'Olu considers himself to be intelligent'

a') Olú gbàgbọ pé òun jẹ ọlọgbón  
 Olu believe that he be wise-person  
 'Olu believes that he is intelligent'

a'') \* Olú gbàgbọ pé ara rẹ jẹ ọlọgbón  
 Olu believe that body his be wise-person  
 '\*Olu believes that himself is intelligent'

#### 4.2.2 Long distance relations and the variety of clausal embedding types

D4a) Olú rọ Adé láti fọkàn tán òun / \* ara òun  
 Olu plead-with Ade to put-heart-complete him body his  
 'Olu pleaded with Ade to trust him'

b) Olú rọ Adé láti ra ìwé kan fún òun / \* ara òun  
 Olu plead-with Ade to buy book one for him body his  
 'Olu asked Ade to buy a book for him'

c) Olú rọ Adé láti sọrọ si òun / \* ara òun  
 Olu plead-with Ade to talk to him body his  
 'Olu asked Ade to talk to him'

d) Olú rọ Adé láti sọrọ nípa ara rẹ  
 Olu plead-with Ade to talk about body his  
 'Olu persuaded Ade to talk about himself'

(D4d) is a sort of object control construction. *Ara rẹ* can only be *Adé* but not *Olu*.

e) *Olú* n' retí pé kí Adé fi ọkàn tán òun / \* ara òun  
 Olu PROG. hope that for Ade use heart complete him body his  
 'Olu was expecting Ade to trust him'

f) *Olú* pàṣẹ́ fún Adé láti san owó fún *òun*/\* ara òun  
Olu command for Ade to pay money to him body his  
'Olu ordered Ade to pay him'

g) *Olú* pàṣẹ́ fún Adé láti sọ pé *òun*/\* ara òun gbọ̀n  
Olu command for Ade to say that he body his wise  
'Olu ordered Ade to say that he is wise'

h) *Olú* pàṣẹ́ fún *Adé* láti sọ pé Mária fẹ̀rà̀n *òun*/\* ara òun  
Olu command for Ade to say that Maria like him body his  
'Olu ordered Ade to say that Mary loved him.'

D5a) *Olú* ní ìrètí pé òun /\* ara òun yóò borí  
Olu has hope that he body his will win  
'Olu expects to win'  
'Olu expects himself to win.'

b) *Olú* ní ìrètí pé Adé yóò borí òun /\* ara òun  
Olu has hope that Ade will win/overcome him body his  
'Olu expects that Ade will defeat him'

D6a) *Olú* ní retí pé kí *òun*/\* ara òun ó borí  
Olu PROG. hope that for him body his to win  
'Olu expects for him to win'

b) *Olú* ní retí pé kí Adé ó borí *òun*/\* ara òun  
Olu PROG. hope that for Ade to win him body his  
'Olu expects for Ade to defeat him'

If the coreferent nominal can be a possessive, provide also examples like the following:

D7a) *Olú n' retí pé kí Adé ó borí búròdá òun/!\** ara òun  
 Olu PROG. hope that for Ade to win brother him body his  
 Olu is expecting Ade to defeat his brother.

b) *Olú n' retí pé kí búròdá òun ó borí rẹ̀*  
 Olu PROG. hope that for brother his to win/overcome him  
 'Olu is expecting his brother to defeat him.'

D8a) *Olú ka ara rẹ̀ sí ọ̀lọ̀gbọ̀n*  
 Olu count body his to wise-person  
 'Olu considers himself intelligent.'

a') *Olú ka ara rẹ̀ sí ẹ̀ni tí ó wu àwọ̀n obìnrin*  
 Olu count body his to person which he attracted-to they woman  
 'Olu considers himself attractive to women'

*(It's not a small clause construction)*

b) *Olú ka Màríà sí ẹ̀ni tí ó n' sàfẹ̀rì òun*  
 Olu count Maria to person C she PROG always-expecting-to see him  
 'Olu considers Mary (to be ) fond of him'

c) *Olú ka Màríà sí ẹ̀ni tí ó n' bínú sí òun*  
 Olu count Maria to person C she PROG angry at him  
 'Olu considers Mary (to be ) angry at him.'

**Reciprocal and reflexive not plausible with same references where the strong pronoun occurs**

Yoruba allows verb serialization

It is not obvious that verb serialization can extend the domain of anaphora. Even in cases when the anaphor is after the second or third verb, its antecedent is still local.

- a) Olú ẹ̀ ṣe òògùn pa ara rẹ̀  
Olu make medicine kill body his  
'Olu was addicted to making medicine until he killed himself'  
'Olu made a medicine that killed him'

#### 4.2.3 Reverse anaphora

If your language permits sentential subjects like those in D9, please indicate if coreference succeeds. Your language may not have a verb like implicate, but if so, try a verb that seems close, if possible.

No

- D9a) That X was late upset Oliver.  
b) That X was late suggested that Oliver was guilty.  
c) That X was late made Oliver look guilty.  
d) That X was late implicated Oliver.

- (i) ?? Pípẹ tǐ ó pẹ mú kí inú bí Adé  
Getting-late that he late make COMP stomach born Ade  
'The fact that he was late upset Ade'

#### 4.4 More on long distance anaphor strategies

D10) Olú sọ pé òun rí ara òun  
Olu say that he se body his  
'Olu said that he(log) saw himself(log).'

4.4.1 Position of the antecedent - give judgments where *òun* = *Ade*

Note that **ara rẹ** cannot be used in place of **òun** in the following sentences.

D11a) *Olú sọ fún Adé pé Àdió kò fẹràn òun( tó Sádé)*  
Olu talk to Ade that Adio NEG like him ( reach Sade)  
'Olu told Ade that Adio does not like him (as much as he likes Sade).

b) *Adé sọ fún Olú pé Olá kò fẹràn òun*  
Ade tell for Olu that Ola NEG like him  
'Ade told Olu that Ola does not like him.

c) *Adé sọ fún Olú pé òun kò fẹràn Àdió*  
Ade tell for Olu that he NEG like Adio  
'Ade told Olu that he does not like Adio.'

d) *Olú sọ fún Adé pé Ø kò fẹràn Àdió*  
Olu tell for Ade that NEG like Adio  
'Olu told Ade that *he* does not like Adio.'

e) *Olú mọ pé Adé rò pé Àdió kò fẹràn òun*  
Olu know that Ade think that Adio NEG like him  
'Olu knows that Ade thinks that Adio does not like him.

f) *Adé* mò pé *Olú* rò pé *Àdió* kò fẹ̀ràn *òun*  
 Ade know that Olu think that Adio NEG like him  
 ‘Ade knows that Olu thinks that Adio does not like him.’

D12a) *iyá Adé* rò pé *Àdió* kò fẹ̀ràn *òun* tó àwọn ọmọ yòókù  
 Mother Ade think that Adio NEG like him reach they child remainder  
 ‘Ade's mother thinks that Adio does not like him (as much as he likes the other children).’

b) *iyá Adé* rò pé Ø kò fẹ̀ràn *Àdió*  
 Mother Ade think that NEG like Adio  
 ‘Ade's mother thinks that he does not like Adio.’

c) *Adé* rò pé *Àdió* kò fẹ̀ràn *òun*  
 Ade think that Adio NEG like him  
 ‘Ade thinks that Adio does not like him.’

d) *Lẹ̀ta Adé* sọ pé *Àdió* kò fẹ̀ràn *òun* tó *Ṣolá*  
 Letter Ade say that Adio NEG like him reach Sola  
 ‘Ade's letter said that Adio does not like him (as much as he likes Sola).’

e) *Adé* gbọ pé *Màríà* kò fẹ̀ràn *òun*  
 Ade hear that Maria NEG like him  
 ‘Ade heard that Mary did not like him.’

D13a) *Adé* sọ pé *òun* ti wo  *aso*  *òun*  
 Ade say that he ASP wear dress his  
 ‘Ade said that he had dressed himself’.  
 ‘Ade said that he has worn his dress’

- b) Adé sọ pé òun fi ọwọ òun pa  
 Ade say that he use hand his kill  
 'Ade said that he had wounded himself.'  
 'Ade said that he had wounded his hand'

#### 4.4.2 Antecedent properties

4.4.2.1 Person - Please replace Zeke in the Zeke paradigm of 4.4.1 with first and second person pronouns, and report the results. Even if most of the examples pattern exactly as third person cases do, please be careful to include sentences corresponding to the last three of the Zeke paradigm.

Note: Only the third person pronouns have distinctive logophoric readings in Yoruba.

D11'

- a) Olú sọ fún mi pé Àdìó kò fẹràn mi  
 Olu talk to me that Adio NEG like me  
 'Olu told me that Adio does not like me'

- a') Olú sọ fún ọ pé Àdìó kò fẹràn re  
 Olu talk to you that Adio NEG like you  
 'Olu told you that Adio does not like you'

- b) Mo sọ fún Olú pé Ọlá kò fẹràn mi  
 I tell for Olu that Ola NEG like me  
 'I told Olu that Ola does not like me.'

- b') O sọ fún Olú pé Ọlá kò fẹràn re



You tell for Olu that Ola NEG like you  
'You told Olu that Ola does not like you.'

c) Mo sọ fún Olú pé ń kò fẹ̀ràn Àdìó  
I tell for Olu that I NEG like Adio  
'I told Olu that I don't like Adio.'

c') O sọ fún Olú pé o kò fẹ̀ràn Àdìó  
You tell for Olu that you NEG like Adio  
'You told Olu that you don't like Adio.'

d) Olú sọ fún mi pé n kò fẹ̀ràn Àdìó  
Olu tell for Ade that I NEG like Adio  
'Olu told me that I don't like Adio.'

d') Olú sọ fún o pé o kò fẹ̀ràn Àdìó  
Olu tell for you that you NEG like Adio  
'Olu told you that you do not like Adio.'

e) *Olú* mò pé mo rò pé Àdìó kò fẹ̀ràn mi  
Olu know that I think that Adio NEG like me  
'Olu knows that I thinks that Adio does not like me.'

e') *Olú* mò pé o rò pé Àdìó kò fẹ̀ràn ẹ  
Olu know that you think that Adio NEG like you  
'Olu knows that I thinks that Adio does not like me.'

D12'

a) ìyá mi rò pé Àdìó kò fẹ̀ràn mi  
Mother my think that Adio NEG like me

'My mother thinks that Adio does not like me

a) iyá rẹ rò pé Àdìó kò fẹràn rẹ  
Mother your think that Adio NEG like you  
'Your mother thinks that Adio does not like you'

b) iyá mi rò pé n kò fẹràn Àdìó  
Mother me think that I NEG like Adio  
'My mother thinks that I do not like Adio.'

b') iyá rẹ rò pé o kò fẹràn Àdìó  
Mother your think that you NEG like Adio  
'Your mother thinks that you do not like Adio.'

D13'

a) Mo sọ pé mo ti wọ aṣọ tẹmi  
I say that I ASP wear dress of-me  
'I said that I have finished dressing'.  
'I said that I have worn my own dress'

b) O sọ pé o ti wọ aṣọ tìrẹ  
You say that you ASP wear dress your  
'You said that you have finished dressing'.  
'You said that you have worn your own dress'

c) Mo sọ pé mo fi ọwọ mi pa  
I say that I use hand my kill  
'I said that I have wounded myself.'  
'I said that I have wounded my hand'

- d) O sọ pé o fi ọwọ rẹ pa  
 You say that you use hand your kill  
 'You said that you have wounded yourself.'  
 'You said that you have wounded your hand'

#### 4.4.2.2 Quantified antecedents.

- D11" a) Olú sọ fún ọmọ kọ̀ọ̀kan pé Àdìó kò fẹ̀ràn n rẹ̀  
 Olu talk to child each that Adio NEG like him  
 'Olu told every child that Adio does not like him'

*Ọmọ kọ̀ọ̀kan sọ fún Olú pé Ọla kò fẹ̀ràn oun*  
 Child each tell for Olu that Ola NEG like him  
 'Every child told Olu that Ola does not like him.'

*Ọmọ kọ̀ọ̀kan sọ fún Olú pé oun kò fẹ̀ràn Àdìó*  
 Child each tell for Olu that he NEG like Adio  
 'Every child told Olu that he does not like Adio.'

- d) Olú sọ fún ọmọ kọ̀ọ̀kan pé Ø kò fẹ̀ràn Àdìó  
 Olu tell for child every that NEG like Adio  
 'Olu told *every child* that *he* does not like Adio.'

#### 4.4.2.3 Split antecedents -

- D14a) \* *Olú sọ̀rọ̀ nípa Màríà fún wọn / ara wọn*  
 Olu talk about Mary to them body their  
 'Olu talked about Mary to themselves' (Also bad in English, I presume.)

*Olú sọ̀rọ̀ nípa ara wọn fún Màríà (wọn = Olú and Màríà)*

Olu talk about body their to Mary  
 'Olu talked about themselves to Mary.'  
 'Olu talked to Mary about them'  
 But 'Olu talked to Mary about each other'

*Olú sọ fún Màrià pé ki o jẹ ki àwọn jáde*  
 Olu say to Mary that COMP she allow COMP they leave  
 'Olu told Mary that they should leave.'

*Olú sọ fún Màrià pé Àdió kò fẹràn àwọn*  
 Olu say to Mary that Adio NEG like them  
 'Olu told Mary that Adio dislikes them.'

*Olú sọ pé Màrià rò pé Àdió kò fẹràn àwọn*  
 Olu say that Mary think that Adio NEG like them  
 'Olu said that Mary thinks that Adio dislikes them.'

#### 4.4.2.4 Discourse antecedents

Note: *Ara òun* cannot be used in place of *òun* in the following sentences.

D15) *Máàkù n bẹ̀rù pé kò sí ààbò fún ọ̀mọ̀ òun.*  
 Mark PROG. fear that NEG. exist protection for child his

*ojú tí ń / \* òun pé òun kò lè dáábò bo àwọn ibátan òun.*  
 Eye push him that he NEG.can break-protection cover they relative him

*Kí ni kọ̀sìn òun yóò máa rò nipa òun?*  
 What be cousin his will think about him

'Mark feared that his son was not safe. He was ashamed that he could not protect his closest relative. What would his cousins think of him?'

D16) Àyà *Máàkù* já láti rí fótò rẹ / \*òun nínú iwé ìròyìn.  
Chest Mark break to see photo his inside paper news

Ó ní gbogbo àwọn alátiléyìn rẹ / òun ni wọn yóò padà léyìn òun  
He say all they supporters his be they will return at-back his

Báwo ni yóò ẹ sọ fún iyá rẹ  
How be will do tell to mother his

'Mark was shocked to see his picture in the paper. He said all of his supporters would abandon him. How would he tell his mother?'

D17) Mọríìsì sọ pé ojú náà nira fún Máàkù.  
Morris say that day the difficult for Mark.

Lákókó, Mọríìsì sọ fún un pé wọn ti ji káà rẹ lọ  
First, Morris say to him that they ASP steal car his go

Léyìn náà, ó wọ tasín lọ síbi işé.  
At-back the, he enter taxi go to-place work

Mọríìsì rò pé inú lè máa bí i  
Morris think that stomach can will born him

'Morris said it was a difficult day for Mark. First, Morris told him that his car had been stolen. Then he had to hire a taxi to take him to work. Morris

thought he might be angry.’ (*This sentence is from the speaker’s perspective*)

D18) A: Wò ó, Máàkù ni ìyẹn  
Look at- it, Mark be that-one  
‘Look, there’s Mark!’

B: Ó mà ọwà o  
He really has-beauty !  
‘He is so handsome.’

A: kò wù mí kí n jẹ ìyàwo rẹ sá  
NEG please me that I be wife his though

Gbogbo obìnrin ni wọn n lẹ e kiri  
All woman be they PROG chase him around  
‘I would not want to be his wife though. All the women are chasing him.’

B: Yàtò sí ìyẹn, Mo rò pé ó ní ìgbéraga púpọ̀  
Apart from that-one, I think that he has pride much  
‘Also, I think he praises himself too much.’

### 4.4.3 Blocking Effects

#### 4.4.3.1 Features of intervening subjects -

D19a) *Olu* rò pé Adé ọ̀wọ̀ fún *oun*  
Olu think that Ade give-respect to him  
‘Olu thinks that Ade respects him.’

b) *Olú* rò pé mo bọ̀wọ̀ fún *òun*

Olu think that I give-respect to him

'Olu thinks that I respect him.'

c) *Olú* rò pé *Màríà* bọ̀wọ̀ fún *òun*

Olu think that Mary give-respect to him

'Olu thinks that Mary respects him.'

d) *Olú* rò pé àwọn ọ̀mọ̀kùnrin náà bọ̀wọ̀ fún *òun*

Olu think that they boy the give-respect to him

'Olu thinks that the boys respect him.'

e) *àwọn ọ̀mọ̀kùnrin náà* rò pé àwọn ọ̀mọ̀kùnrin náà bọ̀wọ̀ fún *àwọn*

they man the think that they boy the give-respect to him

'the men think that the boys respect them.'

Same tests, with the intervening subject in an intermediate clause:

D20a) *Olú* rò pé Adé mò pé Àdió bọ̀wọ̀fún *òun*

Olu think that Ade know that Adio give-respect to him

'Olu thinks that Ade knows that Adio respects him.'

b) *Olú* rò pé mo mò pé Àdió bọ̀wọ̀ fún *òun*

Olu think that I know that Adio give-respect to him

'Olu thinks that I know that Adio respects him.'

c) *Olú* rò pé *Màríà* mò pé Àdió bọ̀wọ̀fún *òun*

Olu think that Mary know that Adio give-respect to him

'Olu thinks that Mary knows that Adio respects him.'

d) Olú rò pé àwọn ọmọkùnrin náà mò pé Àdió bọ̀wọ̀ fún òun  
Olu think that they boy the know that Adio give-respect to him  
'Olu thinks that the boys know that Adio respects him.'

e) àwọn ọmọkùnrin náà rò pé àwọn ọmọkùnrin náà mò pé Àdió bọ̀wọ̀ fún òun  
they man the think that they boy the know that Adio give-respect to him  
'the men think that the boys know that Adio respects them.'

#### 4.4.3.2 Positions of the intervener -

D21a) Àlàbí rò pé Ọpẹ sọ fún Kólá pé Sẹgun bọ̀wọ̀ fún òun  
Alabi think that Ope say to Kola that Segun give-respect to him  
'Alabi thinks that Ope told Kola that Segun respects him.'

b) Àlàbí rò pé Ọpẹ sọ fún mi pé Sẹgun bọ̀wọ̀ fún òun  
Alabi think that Ope say to me that Segun give-respect to him  
'Alabi thinks that Ope told me that Segun respects him.'

c) Àlàbí sọ fún mi pé Sẹgun bọ̀wọ̀ fún òun  
Alabi say to me that Segun give-respect to him  
'Alabi told me that Segun respects him.'

d) Àlàbí sọ pé Sẹgun fún mi ní ìwé nípa òun  
Alabi say that Segun give me ? book about him  
'Alabi said that Segun gave me a book about him.'

#### 4.4.4 Islands

Do syntactic islands affect the acceptability of the current strategy? For all the examples in this section, Ira = X.



D22a) Olú kóríra pé Màrià kóríra òun  
Olu hate that Maria hate him  
'Olu resents the fact that Mary hates him.'

Màrià bòwò fún ọkùnrin tí ó bá fẹ̀ràn rẹ  
Mary give-respect to man COMP he possibly like her  
'Mary respects the man who likes her.'

Màrià sọ pé ọkùnrin tí ó fẹ̀ràn òun jẹ ọlọgbón  
Mary say that man COMP he like her be wise-person  
'Mary says that the man who likes her is intelligent.'

d) Màrià bèèrè bóyá Adé rí òun  
Mary ask whether Ade see her  
'Mary asked whether Ade saw her.'

e) Màrià bèèrè àsìkò tí Adé rí òun  
Mary ask time COMP Ade see her  
'Mary asked when Ade saw her.'

f) Màrià kò tètè mò pé Àdió tẹ̀lé òun  
Mary NEG quickly know that Adio follow her  
'Mary did not realize that Adio followed her.'

g) Pọ̀òlù sọ pé Màrià Màrià lẹ̀wà àti pé òun yóò fẹ ẹ  
Paul say that Mary has-beauty and that he will marry her  
'Paul said that Mary was pretty and that he would marry her.'

### De se reading

Sometimes an interpretation of identity with an antecedent is tinged by a different meaning distinction. There is a famous ambiguity in D23 depending on whether or not the subject of believe is aware that he is referring to himself. The distinction is between two readings where his=Oedipus, that is, we are not interested, for these cases, in readings where his is not Oedipus. Now imagine that Oedipus thinks his step-mother (Step) is his biological mother - he just calls her "mother", because Step is the only mother he has ever known. Now let us suppose that Oedipus is the only one in town who is unaware who his biological mother (Bio) is, perhaps because Bio is a notorious person of whom polite people do not normally speak. People in town, in spite of what they know, generally refer to Step as Oedipus' mother, since no one wants to bring up the subject of Bio. Then Bio, long out of town, makes a surprise visit to the town to see Oedipus, whom she finds scowling in his front yard, angry at Step because she has punished him. Bio spends some time with Oedipus, as others watch suspiciously, but Bio does not tell Oedipus who she is. Oedipus thinks Bio is nice. Then someone says D23a or D23b.

D23a) *Oedipus* thinks/says *his* mother is nice.

b) *Oedipus* thinks/says *his* mother is mean.

Now his in both examples is to be coconstrued with Oedipus, but his mother in (23a) refers to Bio, whom he does not know is his mother, while (D23b) refers to Step, who is the only one Oedipus thinks is his mother (though others know otherwise), and Oedipus is angry at her just now. In some languages, a different morphological form, a different pronoun for example, is used to distinguish the two readings. If your language is like English, then there is no morphological distinction between the pronouns in (D23a,b). Just say so and move on. However, other languages have such a morphological distinction (often it is like the logophoric distinction, discussed above, but not always), and if there is such

a distinction in your language, then translate the examples indicating the difference in pronouns. If there is such a difference, we will ask you more about it after we get the questionnaire responses.

D23a) Pọ̀ọ̀lù rọ̀ pé ìyá ọ̀un níwà  
Paul think that mother his have-character  
'Paul thinks that his mother is nice.'

b) Pọ̀ọ̀lù rọ̀ pé ìyá rẹ̀ kò níwà  
Paul think that mother his NEG have-character  
'Paul believes thinks that his mother is mean.'

Note: In Yoruba, the strong pronoun ọ̀un is used for de-se readings while the weak pronoun rẹ̀ can be used for non-de-se readings.

### ***PART 5 Final thoughts***

*5.1 - Having looked at the details of each strategy individually, do you have any general comments on differences in meaning between the various strategies, conditions that would cause one or another to be preferred or required, etc.?*

*5.2 - Are there any properties of the questionnaire that you think could be improved, made more relevant, or more flexible? Is there any part of the questionnaire that you thought was unsuccessful at addressing what seems to you an important class of phenomena for our anaphora project? Please make us aware of any way in which you think we could improve our data collection.*