

**Anaphora in the African Languages**  
**Questionnaire Response for CiNsenga, Ngoni dialect - Version 2.3**

The dialect reported on is the Ngoni dialect of Nsenga (or CiNsenga), spoken in southern Eastern Zambia and western Central Malawi. It's in the Bantu family (Ethnologue code NSE).

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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 - Translate the following example to your language,

and indicate the element (if any) that expresses the reflexive relationship. If the verb see is somehow unusual in your language, use a more typical transitive verb instead.

A1) John saw himself.

John     $\emptyset$  – e – zĭ- on - a  
3sg-past-refl-see-fv

STRATEGY A

‘ John saw himself’

Choose a short name (label) for this strategy. It will be used to refer to this strategy in the remainder of the questionnaire. You can label it Strategy A, or you may choose a more descriptive name. For example, in English, we might call the strategy in A1 "x-SELF" or "pronoun-SELF" since the pronoun varies and the SELF form is constant. In Dutch, one might use the label ZICHZELF since the form that is used to translate English sentences like A1, but there is also a form zich, which can be used with the verb meaning "wash" but not with the verb meaning see under normal circumstances, hence we would want to label that strategy the ZICH strategy, or Strategy B. Whatever label you choose, please use it consistently.

2.1.2 Is there another way, or ways, to express coreference in A1 (that is, with the verb see held constant)? If so, give examples of their use now, and label them (use Strategy B, C, or choose your own labels). For example, in German both Hans und Maria sehen sich and Hans und Maria sehen einander are possible with a reciprocal reading (although the sich strategy also allows a reflexive reading). Hold off on presenting reciprocal strategies - we have a special section for that.

No

2.1.3 Other verb types - Some languages use a special reflexive strategy with certain verbs, especially "commonly reflexive" verbs of grooming such as "wash", "shave", "bathe", "dress", etc. For example, in English one can say John washes as well as John



- b) Mary cut herself. [accidentally]  
 c) John is ashamed of himself.  
 d) John destroyed himself.  
 e) We hate ourselves.
- } All these involve Strategy A  
 (see examples below)

b) Mary  $\emptyset$  – e – zî- cek - a  
 3sg-past-refl-cut-fv  
 ‘ Mary cut herself’

c) John o – zî- mv -îsh - á nsoni  
 3sg-refl-hear-caus-fv shame  
 ‘ John is ashamed of himself’

d) John  $\emptyset$  – e – zî- cének - a  
 3sg-past-refl-destroy-fv  
 ‘ John destroyed himself’

e) (Sewo) tu – zî- nyany - a  
 we 1pl-refl-hate-fv  
 ‘ We hate ourselves’

Here we are just trying to see if there are other strategies besides the ones you have named, so if the examples above do not uncover a new strategy, (e.g., in English, John washed can only be understood reflexively) then just translate them and move on. At this point, we are just making an inventory of strategies.

2.1.4 Obliques and other argument types - In the preceding examples, the coindexed arguments were subject and object. Many languages use a different coreference strategy for oblique arguments. Does yours? Consider a variety of oblique objects (dative, genitive, etc., as appropriate for your language), as well subcategorized



- f. Maria ø- é- ón – á búkú ku-vuli kwake.  
 3sg.past-see-fv book loc-back loc.hers  
 ‘ Maria saw a book behind her’
- g. Peter ø- é- zí- gúl – ìl – á búku.  
 3sg-past-buy-appl-fv book  
 ‘ Peter bought the book for himself’

The form *mwinicozi* in (A3b and A3c) provides an emphatic reading and serves to enforce the coreference between *yeve* and *Peter*. Without *mwinicozi* the pronoun *yeve* does not necessarily co-refer with Peter; in fact it is more likely to be construed as co-referring to someone other than Peter. Interestingly, *mwinicozi* cannot be used independently as a reflexive pronoun (Y1a) unless the object null strategy is used (Y1c); nor can it be associated with a direct object that is not reflexively construed (Y1b) nor when it is attached to an object to be coconstrued with a higher subject, as in (Ye)

- Y1a. \* Peter ø- é- úzh - á mwínicózi zá phwando  
 3sg-past-tell-fv owner about feast  
 ‘ Peter told himself about the feast’

- Y1b. \*Maria ø- é- úzh – á Peter mwínicôzi zá phwando  
 3sg.past-tell-fv owner about feast  
 ‘ Maria told Peter himself about the feast’

*Mwinicozi* is possible with the null object strategy (here *mwinicozi* would serve in place of an independent subject pronoun). It is not possible when the direct object is present only in the form of an object marker pronoun, not an independent pronoun.

- Yc. mwinicozi w – a – vwal – a  
 owner 3sg-perf-dress.up-fv  
 ‘ She has dressed herself’

Yd. mwinicozi w – a – samb – a  
 owner 3sg-perf-wash-fv  
 ‘ She has washed herself’

Note: When *mwinicozi* is used the speaker conveys a (negative) judgment of the event in the form of “ X thinks that she has dressed/washed/etc.” . In other words the sentences above convey the thought: “ According to her she has dressed/washed...” (because she doesn’ t look dressed/washed).

*Mwinicozi* cannot be attached to an object when the coconstrual is with a non-clausemate antecedent

Y1e. \*Shuko o – nen – a kuti Selina ø – e – on – a yeve  
 mwinicozi  
 3sg-say-fv that 3sg-past-see-fv 3sg  
 ‘ Shuko says that Selina saw him’ (him = Shuko)

This form always takes a subject antecedent. The expression *mwinicozi* is in most cases optional (it’ s primary function is to convey emphasis).

*Mwinicozi* means “ owner” in other contexts. In such cases the expression invariably occurs in the structure: owner of X

Y1f. Khuzwayo ñi mwíńícózí wá nǐńgá ìyì  
 cop owner of bicycle this  
 ‘ Khuzwayo is the owner of this bicycle’

Also consider things like experiencer-subject verbs, non-nominative subjects, etc., which have unusual argument structures in many languages. Some verb meanings you might try:

A4.

a. Etta o- zî- nyany – a  
3sg-refl-hate-fv

‘ Etta hates herself’

b. Etta o- zî- yofy – a  
3sg-refl-scare-fv

Etta scares herself’

c. Etta o- zî- dándaul – ish -a  
3sg-refl-worry-caus-fv

‘ Etta worries herself’

All these involve Strategy A

2.1.5 Person and number - Some languages use different strategies depending on person or number. For example, in Dutch, the special reflexive pronoun zich used with certain verbs is only used in the third person; first and second person coreference for these verbs is expressed with ordinary pronouns (pronouns that do not normally have to have an antecedent), which should therefore be considered a distinct local coreference strategy.

Consider the preceding sentences with first and second person subjects, and also with plurals. Also check for differences between full NPs, overt third person pronouns, and null subjects/objects (if your language allows them). Some of you may speak a language that distinguishes singulars, plurals and duals, and if so, please check for the dual reading. Do any of these allow the use of a strategy we have not yet seen? If so, name each new strategy and give an example here.

No. None of these involves a new strategy.

A5 a. N – é – zî – on – a

agr-past-refl-see-fv

‘ I saw myself’

b. W – é – zî – cek – a

agr-past-refl-cut-fv

‘ You cut yourself’

Note: In (b) it doesn’ t matter the cutting oneself is accidental or on purpose.

c. Ti – ka – sâmb – e

agr-fut-wash-fv

‘ We will wash ourselves’

d. Ti – zi – yâvy – e

agr-refl-help-fv

‘ We must help ourselves’

2.1.6 Strategies for other clausemate environments - If there are any additional reflexive strategies known to you (from grammars, or from your linguistic knowledge), list them now. Name each new strategy with a short name or label, and give one example.

Take a few minutes to consider other variations on the sentence types which might involve a special strategy. Some possibilities:

(a) Is there any strategy which is only possible with some special aspectual class of a verb? Some examples:

Yes. The – EKA STRATEGY is possible (i) in combination with STRATEGY A (i.e. with – zi affix), or by itself with predicates that denote ‘ grooming, e.g. wash, dress, undress, shave, etc. – EKA STRATEGY cannot be used by itself if the verb is transitive

(or has been transitivized) – hence the contrast between (5) and (6). The sentences with describe events that take place without external causation (see more on -EKA later).

A6a. Paul ø- é- sámb – á y-eka  
3sg-past-wash-fv 3sg-alone  
' Paul washed himself'

b. Paul ø- é- vúl – á y-eka  
3sg-past-undress-fv 3sg-alone  
' Paul undressed himself'

c. Paul ø- é- vwál – á y-eka  
3sg-past-dress-fv 3sg-alone  
' Paul dressed himself'

d. Paul ø- é- mét – á y-eka  
3sg-past-shave-fv 3sg-alone  
' Paul shaved himself'

A6a1. \*Peter ó- zíw – á y-eka  
3sg-know-fv 3sg-alone  
' Peter knows himself'

A6a2. Peter o- zí- zíw – á y-eka  
3sg-refl-know-fv 3sg-alone  
' Peter knows himself' (yeka has an emphatic reading here)

(b) Do quantificational constructions involve a separate strategy?

No, they don't. STRATEGY A would apply in all of these sentences

- A7 a. Mlúmbwáná áfiyénse ø- é- zí- lang – a  
boy every 3sg-pst-look-fv  
' Every boy looked at himself'
- b. Azimai onse ŵ - é- zí- úzh – á zá John  
women all 3pl-past-tell-fv of  
' All the women described John to themselves'  
(Lit. ' All the women told themselves about John' )
- c. Mphunzisi aliyense ø- é- zí- zíŵ – ísh – á kwá Bob  
teacher every 3sg-past-refl-know-caus-fv to  
' Every teacher introduced himself to Bob' (Lit. ' Every teacher made  
himself known to Bob)
- d. ŵ áná ŵ áyake ŵ o- zí- yávy – á ŵ -eka  
children some 3pl-refl-help-fv 3pl-alone  
' Some children only help themselves'

The function of *eka* is somewhat subtle when used in combination with Strategy A (as in A7d). As noted, *eka* is optional since Strategy A by itself suffices to express reflexivity. In this particular case, however, *eka* adds an emphatic meaning to the sentence by asserting that the activity in question was not induced (or initiated) by some outside forces. Thus the interpretation of A7d is **that the children out of their own volition help themselves and (also that) they don't help anyone else**. One can envisage a different scenario in which someone advises or instructs the children to help themselves: if the children wind up helping themselves, then the appropriate construction would be one in which *eka* is omitted. Another context in which *eka* would be omitted is where the

children help someone else in addition to helping themselves - here *eka* restricts the bounds to which the help was extended.

(c) If your language has a system of grammaticized honorifics, do some types of honorific allow a strategy that has not been listed yet? The Yoruba example below allows several plural interpretations, as given below, but it can also mean "He (honorific) saw himself", although it is not otherwise singular.

This language does not have grammaticized honorifics. Plural (agreement) markers instead serve as honorifics.

(d) The above were all tensed main clauses. Experiment with placing both coreferring arguments in various types of subordinate clauses, as your language allows. For example, consider tensed complements, subjunctives, infinitivals, purpose clauses, or any other embedding construction your language provides. (But keep both coreferent arguments in the same clause). Only provide examples corresponding to the sentences in A9 if any translation reveals a new strategy (which you should name).

2.1.6 A9a. No new strategy is revealed here. They all use STRATEGY A

## 2.2 Ordinary (potentially independent) pronouns

2.2.1 First, show that the pronouns can be independent by using them in a sentence where they do not have an antecedent. In the paradigms below, for example, the first sentence provides a context, and, for A10a,b the pronoun appears in the second sentence without an antecedent in that sentence, but referring to Abraham. The same test is made with first and second person pronouns in A10c. If it is more convenient for you to construct your own sentences, feel free to do so.

A10a) Néwó n- é- láw'íl – á ná Tony mailo. Yévé ø- é- ón – á Lela.

I 1sg-past-speak-fv with yesterday He 3sg-past-see  
 ‘ I spoke to Tony yesterday. He saw Lela’

b) Abraham a- í ku-ni? (néwó) n- é- mú- ón – á mu-msika.  
 3sg-be loc-where (I) 1sg-past-3sg-see-fv loc-market  
 ‘ Where is Abraham? I saw him in the market’

c) (Séwó) t- é- kú- on – a. (Wéwó) w- é- fi- on – a ?  
 We 1pl-past-2sg-see-fv. You.sg 2sg-past-1pl-see-fv  
 ‘ We saw you. Did you see 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.

Cinsenga has independent as well as affixal pronouns. The independent pronouns are:

Newo / Sewo	First person (singular / plural)
Weo / Mwewo	Second person (singular / plural)
Yeve / wê eve	Third person (singular / plural)

It is possible to have an argument position pronoun (not an object marker) used as a direct object although what is clearly the preferred choice is to have the object marker on the verb: if an independent pronoun is to be used, it is for emphatic reasons. Thus when a pronoun is used in this position the preferred choice is for the pronoun to be used in conjunction with the *eka* strategy.

Fa) Donna ø – e – vul – a wewo  
 3sg-past-undress-fv 2sg  
 ‘ Donna undressed you’



meaning, provide an example here with a reciprocal translation.

2.3.2 As a means of assessing what sorts of reciprocal strategies your language contains, consider these typical sorts of reciprocal sentences in English. If a new strategy is involved (a special reciprocal form, or affix, or clitic or argument drop, or verb form, etc.), name it and give an example.

A11a) azimai ŵ ó- ón – an – a

Women 3pl-see-recip-fv

‘ The women see each other’

b) alúmbwáná ŵ - é- sám̂ -ísh – an – a

boys 3pl-past-wash-caus-recip-fv

‘ The boys washed each other.’

c) Mádódá ŵ - é- pesul – an – a sisi

men 3pl-past-comb-recip-fv hair

‘ The men combed each other's hair.’

d) ŵ – é- shúsh – an – a

3pl-past-argue-recip-fv

‘ They argued with each other’

e) alúmbwáná ŵ - é- fimb – an – a

boys 3pl-past-kick-recip-fv

‘ The boys kicked each other.’

f) ŵ ó- nyány – an – a

3pl-hate-recip-fv

‘ They hate each other.’

The affix -an is consistently present on all forms with a reciprocal reading.

The reciprocal -an can be used in conjunction with the – EKA STRATEGY. Note that *eka* adds an emphatic meaning to the sentence by suggesting that the activity in question was not externally induced and (as noted for A7d above) *eka* restricts the bounds of the activity/event to the said individuals (i.e. “ *no one else*” ).

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

A12a) Mádódá ŵ - é- zíŵ – ísh – án -á James

Men 3pl-past-know-caus-recip-fv

‘ The men introduced James to each other’

b) Wóyéndá ŵ - é- láŵ ízh – an – a

travelers 3pl-past-talk.to-reci-fv

‘ The travelers talked to each other’

c) Azibúsa ŵ - é- mvŵil – án – á mbíí záwo

priests 3pl-past-listen-recip-fv stories their

‘ The priests heard stories about each other’

d) Ŵ- é- síy – íl – án – á mphásó kú-nthángu kwáwo

3pl-past-leave-appl-recip-fv presents loc-front their

‘ They left presents in front of each other’

2.3.4 Other persons and numbers, etc. If another, so-far unknown strategy is used in some persons or numbers, or special aspectual classes etc., name it here.

A13a) T- e- ón – an – a

1pl-past-see- recip-fv

‘ We saw each other’

b) Mu- kô- yavy – an – a

2pl-imp-help- recip-fv

‘ You (pl) must help each other’

c) Tì- ka- sâmb – e                      or      Tí- ka- zí- sâmb – ísh – e

1pl-fut-wash-fv

1pl-fut-refl-wash-caus-fv

‘ We will wash ourselves’

d) ó- thánd-ó-zúzul – an – a

3pl-like-INF-criticize- recip-fv

‘ They always criticize each other’ (Lit. ‘ they like to criticize each other’ )

e) Alúmbwáná ŵ á-nyinji ŵ - é- fimb – an – a

boys                      agr-many 3pl-past-kick- recip-fv

‘ Many boys kicked each other’

Verbs compatible with the OBJECT-NULL strategy (e.g. samba ‘ wash’ , vwala ‘ dress up’ ) are, in a sense, inherently reflexive in that they describe activities that one does to oneself and not to somebody else.

2.3.5 Other clause types, and other strategies: Briefly consider various types of reciprocal embedded clauses; if a new coreference strategy can be used with some of them, name it here. Also consider if there may be a reciprocal strategy not identified by the preceding questions. 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.



This is a definite case of possessor raising. Literary (c) says “ Paul cut himself hand” , and the equivalent in English would be something like “ Paul cut himself (on the hand)” .

- d) Paul ø- é- zí- píim – á kwanja  
 3sg-past-refl-examine-fv hand  
 ‘ Paul examined his hand’ (i.e. his = Paul’ s)

Note that with inalienable possessions STRATEGY A is used and possession itself is not expressed. At first sight it appears as if the occurrence of *zí-* does not rule out the occurrence of a direct object. A closer examination of A15 c, d, however, reveals that possessor raising has occurred in these structures such that the NP kwanja ‘ hand’ , though adjacent to the verb, is not a direct object in these constructions.

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.)

- |  |   |  |
|--|---|--|
| <p>A16) ku- zí- thémb – á kwá Andrew kw- é- kálip – ísh – á Mary<br/>         Inf-refl-rely-fv of agr-past-angr-caus-fv<br/>         ‘ Andrew's self-confidence annoyed Mary.’</p>                               | } | <p><b>No new<br/>strategy<br/>revealed</b></p> |
| <p>A17) ku- zí- zíw – ísh – á kwá Andrew kw- é- wámízh – á mphuzisi<br/>         Inf-refl-know-caus-fv of agr-past-please-fv teacher<br/>         ‘ Andrew's introduction of himself impressed the teacher.’</p> |   |  |

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. Can't think of anything, at least for now.

### Part 3: General details about the strategies

#### STRATEGY A

##### 3.1 Marking

a. For this strategy, marking is on the verb (the reflexive morpheme – zi- appear of the verb) as shown in the following (3.1A)

3.1A Sam ø- e- zî- lum – a  
                  3sg-past-refl-bite-fv  
                  ‘ Sam bit himself’

Note that (i) the argument structure of the verb is reduced by one argument, and (ii) the reflexive affix – zi- occupies the same position that is occupied by the object marker (OM) on the verb and, because of this, the reflexive morpheme and the object marker mutually exclude each other.

##### 3.2 Productivity

(1) Strategy A is extremely productive: it can apply to virtually any transitive verb (e.g. (i)), or verb which has been transitivized by some argument-structure changing operation such as the attachment to the verb of the causative or applicative affix (as in (ii) and (iii)).

- i. Maria ø – é – zî- kwápûl - a  
3sg-past-refl-whip-fv  
' Maria whipped herself'
  
- ii. John ø – é – zî – w – ish – a  
3sg-past-refl-fall-caus-fv  
' John made himself fall'
  
- iii. John ø – zî- yénd – él – a  
3sg-refl-walk-applic-fv  
' John walks by himself'

(2) As hinted in (1) above, STRATEGY A does not apply to intransitive verbs.

### 3.3 Context of Use

STRATEGY A is the most natural (unmarked) way of expressing a reflexive relation in any style of language. The reflexive morpheme has not specific tone – tone assignment is determined by other factors.

### 3.4 Morphology

The reflexive element zî- means 'self'. This element does not have a non-reflexive meaning and cannot be used for any purpose other than expressing the reflexive meaning. The reflexive element only attaches to verbs; it does not have any agreement properties – and so its shape is invariant irrespective of the noun class of the subject NP with which it co-refers. This is illustrated below:

- i. Salome  $\emptyset$ - e- *zí-* lumb – a  
3sg-past-refl-praise-fv  
' Salome praised herself'
- ii. Salome ná Lazalo  $\hat{w}$  - e- *zí-* lumb – a  
and 3pl-past-refl-praise-fv  
' Salome and Lazalo praised themselves'

The affix – *zi-* is not related to any other form that has an independent meaning in the language.

### 3.5 The agreement paradigm

This morpheme is invariant. It does not agree with any type of noun.

### 3.6 Interaction with verb morphology

The reflexive morpheme is incompatible with the following verbal affixes: Object Marker (as stated above), passive, reciprocal, and stative.

- i. \*Salome  $\emptyset$ - e- *zí-* lumb – iw – a (incompatible with passive)  
3sg-past-refl-praise-pass-fv  
' Salome was herself praised'
- ii. \*Salome  $\emptyset$ - e- *zí-* lumb – ik – a (incompatible with stative)  
3sg-past-refl-praise-stat-fv  
' Salome was herself praised/praisable'
- iii. \*Salome ná Lazalo  $\hat{w}$  - e- *zí-* lumb – an – a (incompatible with reciprocal)  
and 3pl-past-refl-praise-recip-fv

‘ Salome and Lazalo praised each other themselves’

### 3.7 Non-coreference uses

The morpheme – zi- is always reflexive. It does not have other idiosyncratic properties that I am aware of; and it is not function as an emphatic particle or an intensifier.

### 3.8 Proxy reading

This is a rather gray area in this language. There are very limited cases, though, in which the current strategy can generate structures with proxy readings. The strategy can work with some of the verbs whose meaning is associated with ‘ grooming’ oneself.

- i. Juve ø - e – zí – sám̄b – ish – a ku-msana  
3sg-past-refl-wash-caus-fv loc-back

‘ Juve washed himself in the back’

- ii. Katonya w- a- zí- vul – a cisoti  
3sg-perf-refl-undress-fv hat

‘ Katonya has taken off his hat’ (Lit. ‘ Juve undressed himself (of his) hat’ )

One can conceive of a situation in which both (i) and (ii) would have proxy readings: (i) could describe a situation in which Juve washes a statue of himself; similarly in (ii) Katonya takes the hat off a statue of himself. It should be pointed out though that proxy readings are quite marginal (but possible with this strategy).

Note that both (i) and (ii) have a possessor reading (only implied in the translation of (i) but expressed in (ii)). The possessor readings come, in part, from the semantics of samba ‘ wash’ and vula ‘ undress’ – verbs which, in this case, describe action that one performs on oneself.

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) ? Libeli á- kú- tí yévé ó- mwíík – á lúwémé ngâko mu ciNgoni  
3sg-inf-say he 3sg-sound-fv well more in  
' Libeli says he sounds better in ciNgoni. (where he = Libeli)

The proxy reading here is rather marginal here, probably because the pronoun yeve in the embedded clause does not necessarily corefer with Libeli (it could refer to some other person). However, yeve here can be understood to refer to the written works by Libeli. Note though that when yeve simply refers to Libeli the sentences in question would be OK (not marginal at all).

Interestingly, if one uses mwínicozi instead of yeve the coreference between Libeli and the embedded subject is stronger as illustrated in Y2a

Y2a) ? Libeli á- kú- tí mwínícózi ó- mwíík – á lúwémé ngâko mu ciNgoni  
3sg-inf-say owner 3sg-sound-fv well more in  
' Libeli says he sounds better in ciNgoni. (Lit. Libeli says that he himself sounds better in ciNgoni)

## OBJECT – NULL STRATEGY

### 3.1 Marking

This strategy has no morphological marking.

i. Juve ø - e – sâmb – a  
3sg-past-wash-fv

‘ Juve washed himself ’

This strategy applies to verbs that are inherently intransitive. The strategy does not appear to affect the argument structure of the verb: the intransitive verb samba here retains its single argument.

### 3.2 Productivity

This strategy is very restricted: it applies to a small class of intransitive verbs relating to ‘ grooming oneself ’ such as wash (oneself), dress (oneself), shave (oneself), comb (oneself), etc.

ii. . Juve w - a – vwâl – a  
3sg-perf-dress-fv  
‘ Juve has dressed himself ’

iii. Juve w - a – mêt – a  
3sg-past-shave-fv  
‘ Juve has shaved himself ’

iv. . \*Shuko ø - e – ûk – a  
3sg-past-wake.up-fv  
‘ Shuko woke himself up ’  
(OK: ‘ Shuko woke up ’ )

v. . \*Shuko ø - e – nkhat – a  
3sg-past-sit-fv  
‘ Shuko sat himself ’  
(OK: ‘ Shuko sat ’ )

### 3.3 Context of use

In the limited contexts in which this strategy is used, it represents the unmarked way of expressing reflexive meaning.

**3.4 Morphology** Does not apply

**3.5 The agreement paradigm** Does not apply

### **3.6 Interaction with verb morphology**

This strategy is incompatible with the Object Marker (OM) and verbal extensions (viz: causative, applicative, reciprocal, and passive affixes), be it singly or in combination (where combinations are permitted).

### **3.8 Proxy reading**

A proxy reading seems to be impossible with this strategy. Thus given a statue of Juve the following sentences cannot have a proxy reading under any context.

vi. . Juve w - a – vwâl – a

3sg-perf-dress-fv

‘ Juve has dressed himself ’

NOT ‘ Juve has dressed a statue of himself’

vii. Juve w - a – mêt – a

3sg-past-shave-fv

‘ Juve has shaved himself ’

Not ‘ Juve has shaved a statue of himself’

## **-EKA STRATEGY**

### **3.1 Marking**

This strategy employs an independent pronominal element which must share the same agreement as the subject NP.

i. Juve w - a – vwal – a y - eka  
3sg-perf-dress-fv 3sg-refl

‘ Juve has dressed himself ’

ii. Mádôdá ŵ - e– zî– sék – á ŵ - eka  
men 3pl-past-refl-laugh.at-fv 3pl-refl

‘ The men laughed at themselves ’

iii. Mádódá ŵ - e- timb – án – á ŵ - eka  
men 3pl-past-hit- recip-fv 3pl-refl

‘ The men fought themselves ’ (Lit. The men hit each other themselves’ )

Note that this strategy is always utilized in combination with other strategies – viz: Object-Null (as in (i)), Strategy A (as in (ii)) and Reciprocal strategy (as in (iii)).

### 3.2 Productivity

To the extent that this strategy is utilized in combination with other strategies, it can be considered as extremely productive. This strategy is mostly possible where the other strategies are: in other words, it tends to be restricted to only those constructions in which the other strategies are possible. Note though that some verbs which do not permit OBJECT-NULL strategy do have a reflexive reading with the current strategy.

iv. . Shuko ø - é – úk – á y- eka  
3sg-past-wake.up-fv 3sg-refl

‘ Shuko woke himself up ’

v. . Shuko ø - é – nkhal – á y- eka  
3sg-past-sit-fv 3sg-refl

‘ Shuko sat himself ’

Essentially – eka conveys the meaning ‘ X did something by himself/herself/themselves’ (i.e. by own volition or without an external instigator) and has the effect of making the reflexive meaning emphatic. One can imagine a scenario in which Shuko goes to a restaurant and waits to be sat but there’ s no waiter in sight to attend to him. If Shuko takes it upon himself to sit at a table of his choice yeka in (v) would emphasize the fact that he sat himself.

### 3.3 Context of use

The use of this strategy is marked in the sense that it has emphatic uses (mostly).

### 3.4 Morphology

This element in its entirety means “ alone” or “ by oneself”

- i. ni- li n- eka  
1sg-be 1sg-alone  
‘ I am alone’
- ii. Asimbi ŵ a- li ŵ - eka  
girls 3pl-be 3pl-alone  
‘ The girls are alone/by themselves’

In its reflexive use, this element, as mentioned above, is inflected with a prefix which agrees with the subject NP of the clause. The base of the element itself remains invariant.

### 3.5 The agreement paradigm

This morpheme is always prefixed with a noun class marker which agrees with its co-referent

### 3.6 Interaction with verbal morphology

This element has no restriction on verbal morphology: it can occur with verbs containing any of the following affixes (or an possible combination of these affixes): Object Marker, Reflexive, Passive, Reciprocal, Causative, Stative, and Applicative.

### 3.7 Non-coreference use

*-eka* is also used in ciNsenga to mean *only* or *alone*

- i. N – á – khánd – á mángá i-mó y-eka  
agr-past-find-fv mango agr-one agr-only  
' I found only one mago'
  
- ii. Ni – kú – y – á n-eka  
agr-inf-go-fv agr-alone  
' I am going alone'

### 3.8 Proxy reading

This strategy does not permit proxy readings. Thus, given a statue of the said person in the appropriate contexts, a proxy reading is not possible for the following sentences (even though such a reading would be possible if -yeka were deleted).

- iii. Juve ø - é – zí – sámb – ish – a y-eka ku-msana  
3sg-past-refl-wash-caus-fv 3sg-refl loc-back  
' Juve washed himself in the back'
  
- iv. Katonya w- á- zí- vul – a y-eka cisoti  
3sg-perf-refl-undress-fv 3sg-refl hat  
' Katonya has taken off his hat' (Lit. ' Juve undressed himself (of his) hat' )

## PART 4 Exploration of syntactic domains

- X1 a. \*Shuko ø- e- timb – a  
3sg-past-hit-fv  
' Shuko hit'
- b. Shuko ø- e- zí- timb – a  
3sg-past-refl-hit-fv  
' Shuko hit himself'
- c. \*Alúmbwáná ŵ - e- timb – a  
boys 3pl-past-hit-fv  
' The boys hit'
- d/e. Alúmbwáná ŵ - e- timb – an – a  
boys 3pl-past-hit-recip-fv  
' The boys hit each other'
- f. \*Shuko ø- e- mú- timb – a  
3sg-past-OM-hit-fv  
' Shuko hit him' (him = Shuko)
- R1. Shuko ø- e- timb – á Lindiwe  
3sg-past-hit-fv  
' Shuko hit Lindiwe'
- R2. \*Shuko ø- e- timb – á y- eka  
3sg-past-hit-fv 3sg-refl  
' Shuko hit himself'

R3. Shuko ø- e- zí- fimb – a y- eka  
3sg-past-refl-hit-fv 3sg-refl  
' Shuko hit himself'

X2 a. Shuko ø- e- sâmb – a  
3sg-past-wash-fv  
' Shuko washed (himself)'

b. \*Shuko ø- e- zí- samb – a  
3sg-past-refl-wash-fv  
' Shuko washed himself'

d/e. Alúmbwáná ŵ - é- sâmb – îsh an – a  
boys 3pl-past-wash-caus-recv-fv  
' The boys washed each other'

f. \*Shuko ø- e- mú- samb – a  
3sg-past-OM-wash-fv  
' Shuko washed him' (him = Shuko)

Y1. Shuko ø- e- zí- sâmb – îsh – a  
3sg-past-refl-wash-caus-fv  
' Shuko washed himself'

Y2. \*Alúmbwáná ŵ - é- sâmb – an – a  
boys 3pl-past-wash-recv-fv  
' The boys washed each other'

Y3. Shuko ø- é- sám b – á y- eka  
 3sg-past-wsh-fv 3sg-refl  
 ‘ Shuko washed himself’

Y4. \*Shuko ø- e- zi- samb – a y- eka  
 3sg-past-refl-hit-fv 3sg-refl  
 ‘ Shuko washed himself’

Now suppose the example is constructed as follows, where what we are seeking to test is whether or not the possessive of an argument of the main predicate (verb in this case) can be represented by one of the coreference strategies that we have identified as holding between coarguments.

X3a)\* Mumbi ø- é- zí- ón – á anyĩna  
 3sg-past-refl-see-fv his.mother  
 ‘ Mumbi saw his mother’ (lit. ‘ Mumbi self-saw his mother’ )

b) Mumbi ø- e- zi- on – el – a anyĩna  
 3sg-past-refl-see-applic-fv his.mother  
 ‘ Mumbi saw his mother (for himself)’

c) \*Mumbi ná Shuko ŵ - é- ón – án – á anyiná wawo (=X3c)  
 and 3pl-past-see- recip-fv mother their  
 ‘ Mumbi and Shuko saw each other’ s mother’

d) Mumbi ná Shuko ŵ - é- ón – á anyiná wawo  
 and 3pl-past-see-fv mother their  
 ‘ Mumbi and Shuko saw their mother’

This sentence is ambiguous (as is the English Equivalent) in that their mother could be Mumbi and Shuko's mother, or some other people's mother. However, a reciprocal reading is ruled out here.

R1 \* Mumbi ná Shuko ŵ - e - zí -ón - á anyiná wawo  
 and 3pl-past-refl-see-fv mother their  
 ' Mumbi and Shuko saw their mother'

R2 Mumbi ná Shuko ŵ - e - zí -ón - él - á anyiná wawo  
 and 3pl-past-refl-see-appl-fv mother their  
 ' Mumbi and Shuko saw their mother for themselves'

R3 \* Mumbi ná Shuko ŵ - e - zí -ón - á anyĩna  
 and 3pl-past-refl-see-fv mother  
 ' Mumbi and Shuko saw their mother'

R2 \* Mumbi ná Shuko ŵ - e - zí -ón - él - á anyĩna  
 and 3pl-past-refl-see-appl-fv mother  
 ' Mumbi and Shuko saw their mother for themselves'

e) Mumbi ø - é - ón - á anyĩna  
 3sg-past-see-fv his.mother  
 ' Mumbi saw his mother'

Here, anyina necessarily refer's to Mumbi's mother, not some other third party.

f. \*John ø - é - sámb - á anyĩna (=X3a)  
 agr-past-wash-fv mother  
 ' John washed mother'

- g. \*John  $\emptyset$  - é - sám - á anyiná wake (=X3a)  
 agr-past-wash-fv mother his  
 ‘ John washed his mother’

## 4.1 Clausemate coconstrual

### 4.1.1 Verb class restrictions

STRATEGY A, as hinted above, can only be used with transitive verbs

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) Mumbi  $\emptyset$  - é - zí - on - a  
 3sg-past-refl-see-fv  
 ‘ Mumbi saw himself’

- b) \*Azimai  $\hat{w}$  - é - lóngósól - á  $\hat{w}$  eve  
 women agr-past-describe-fv them  
 ‘ The women described them’

The verb longosola (‘ describe/explain’ ) typically takes a CP complement, not a noun phrase.

- c) (Mwéwó) mw- é - zí - timb - a  
 you(pl) 2pl-past-refl-hit-fv

‘ You (pl) hit yourselves’

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.

STRATEGY A cannot be used for certain verbs of grooming such as samba ‘ wash’ as shown below:

C3a) \*Donna ø- é- zí- samb – a

3sg-past-refl-wash-fv

‘ Donna washed X’ (X = Donna)

For this verb, OBJECT NULL and – EKA STRATEGIES can be used.

R1a) Donna ø- e- sâmb – a

3sg-past-wash-fv

‘ Donna washed X’ (X = Donna)

R1b) Donna ø- é- sâmb – á y-eka

3sg-past-refl-wash-fv 3sg-refl

‘ Donna washed X’ (X = Donna)

STRATEGY A works for vula ‘ undress’ , but not for vwala ‘ dress’ . The following illustrate:

R1c) Donna ø- e- zí- vul – a

3sg-past-refl-undress-fv

‘ Donna undressed X’ (X = Donna)

R1d) \*Donna ø- e- zí- vwala – a

3sg-past-refl-dress-fv

‘ Donna dressed X’ (X = Donna)

OBJECT NULL and – EKA strategies work for both vula and vwala as shown below:

R1e) Donna ø- e- vûl – a

3sg-past-undress-fv

‘ Donna undressed X’ (X = Donna)

R1f) Donna ø- e- vwâl – a

3sg-past-dress-fv

‘ Donna dressed X’ (X = Donna)

R1g) Donna ø- e- vûl – á y-eka

3sg-past-undress-fv 3sg-refl

‘ Donna undressed X’ (X = Donna)

R1h) Donna ø- e- vwâl – á y-eka

3sg-past-dress-fv 3sg-refl

‘ Donna dressed X’ (X = Donna)

These strategies show the following patterns when used with inalienable possessions.

C3b) Donna ø- e- zí- mét – a sisi

3sg-past-refl-cut-fv hair

‘ Donna cut X’ s hair’ (X = Donna)

R1i) Donna ø- e- met – a sisi

3sg-past-cut-fv hair

‘ Donna cut X’ s hair’ (X = unspecified)

Note here that where the referent for X is unspecified, a reflexive meaning is possible (in fact it is the default meaning).

R1j) Donna ø- e- mét – á y-eka sisi  
3sg-past-cut-fv 3sg-refl hair

‘ Donna cut X’ s hair’ (X = Donna)

C3c) Msimbi ø- e- zî- cek – a  
girl 3sg-past-refl-cut-fv

‘ The girl cut X’ (X = girl)

NB: The structure for (C5a) is the same whether or not the cutting was intentional.

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.

Strategy A works for psychological predicates as shown in the following:

C4a) John o – zî – nyany – a  
3sg-refl-hate-fv

‘ John hates X (X = John)

b) John o – zî – mvw – îl – á nsôni  
3sg-refl- feel-appl-fv shame

‘ John is ashamed of X (X = John)

c) John o – zî – mvv – îl – á nkhawa

3sg-refl-feel-appl-fv worry

‘ John is worried about X’ (X = John)

d) John o – zî – mék – él – a

3sg-refl-be.proud-appl-fv

‘ John is proud of X’ (X = John)

e) John o – zî – shup -a

3sg-refl-trouble-fv

‘ John troubles X’ (X = John)

Note the appearance of the applicative in (C4b – d), which allows for the appearance of the reflexive morpheme. Without the applicative, these predicates would be intransitive and thus would not accommodate the – zi- reflexive morpheme. The following examples illustrate:

R2a \*John o – zî – mvw – á nsôni

3sg-refl- feel-fv shame

‘ John is ashamed of X (X = John)

R2b) \*John o – zî – mwv – á nkhawa

3sg-refl-feel-fv worry

‘ John is worried about X’ (X = John)

R2c) \*John o – zî – mek – a

3sg-refl-be.proud-fv

‘ John is proud of X’ (X = John)

OBJECT NULL strategy is not possible for psychological predicates.

R3a) \*John ó – nyany – a  
3sg-hate-fv  
' John hates X (X = John)

R3b) \*John ó – mvw – îl – á nsôni  
3sg- feel-appl-fv shame  
' John is ashamed of X (X = John)

R3c) \*John ó – mwv – îl – á nkhawa  
3sg-feel-appl-fv worry  
' John is worried about X' (X = John)

R3d) \*John ó – mék – él – a  
3sg-be.proud-appl-fv  
' John is proud of X' (X = John)

R3e) \*John ó – shup -a  
3sg-trouble-fv  
' John troubles X' (X = John)

Without the applicative, (b – d) are possible, but the reflexive meaning disappears since the source of the psychological feeling is removed.

R3f) John a – kú – mvw – á nsôni  
3sg-inf- feel--fv shame  
' John is ashamed of X (X = unspecified)

R3g) John a – kú-mwv – á nkhawa  
3sg-inf-feel-fv worry

‘ John is worried about X’ ( X = unspecified)

R3h) John ó – mek – a  
3sg-be.proud-fv

‘ John is proud (of X’ ) (X = unspecified)

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) msimbi a – ka – zí – cénék – e  
girl 3sg-fut-refl-destroy-fv

‘ The girl will destroy X (X = girl)

C5b) nkhono y – é – zí – fis – a  
snail 3sg-past-refl-hide-fv

‘ The snail hid X’ (X = snail)

OBJECT NULL strategy is not possible with verbs of destruction as can be seen in the following:

C5c) \*msimbi á – ka – cénék – e  
girl 3sg-fut-destroy-fv

‘ The girl will destroy X (X = girl)

C5d) \*nkhono y – e – fis – a  
snail 3sg-past-hide-fv

‘ The snail hid X’ (X = snail)

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) mlúmbwáná ø- e – zíîm – il – a  
boy 3sg-past-refl-stand-appl-fv  
The boys represented X. (lit. ‘ the boy stood for himself’ )

b) John ø- e – zí – láw il – il – a  
3sg-past-refl-speak-appl-fv  
‘ John spoke for X.(X = John)

#### 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) Mary ø- e- twal – a nôngo kwá Tombi  
3sg-past-deliver-fv pot to Tombi  
‘ Mary delivered the pot to Tombi’

C7b) \*Mary ø- e – zí – twal – a nôngo  
3sg-past-refl-deliver-fv pot  
‘ Mary delivered the pot to X’ (X = Mary)

C7c) \*Mary ø – e zí – twál – îl – á nôngo  
3sg-past-refl-deliver-appl-fv pot  
‘ Mary delivered the pot to X’ (X = Mary)

It would seem (from the two examples above) that it is not possible for the subject to co-refer with the indirect object using STRATEGY A.

C7d) John ø- e – zî – ónesh – a ng' ânda  
3sg-past-refl-show-fv house  
' John showed the house to X' (X= John)

C7e) John ø- e – zî – ónesh – a kwá mkhwenyana  
3sg-past-refl-show-fv to son-in-law  
' John showed X to the son in-law' (X= John)

Note here that the verb onesha 'show' is a lexically causativized verb (Dubinsky and Simango, 1996; Simango, 1999); such that the subject (in 10e) co-refers with the direct object, as is typical of reflexives.

OBJECT NULL strategy cannot be used here.

For comparison, also provide judgements for the following:

C8a) Mary ø – e – zî – p – á mphâso  
3sg-past-refl-give-fv gift  
' Mary gave X the gift' (X = Mary)

Note that for the verb give, ciNsenga only has the equivalent of 'X gave Y Z'; there is no construction which corresponds to 'X gave Y to Z'

11 b) John showed X to the children (X = John) (see C7e above)

4.1.2.2 Oblique arguments - Give some examples with oblique arguments, in whatever

forms your language allows. Choose verbs that take oblique arguments in your language and if your language has morphological case, look for arguments that are not in the normal case for objects (e.g., not in the Accusative). For example, in German, the verb helfen meaning "to help" takes an object that is casemarked Dative even though the objects of hit and see would be casemarked Accusative. If your language does not have overt Case, then focus on the indirect objects of ditransitive verbs and prepositional objects, but be sure to consider these sorts of argument types whether your language has casemarking or not.

C9a) \*Salome  $\emptyset$  – e – la<sup>w</sup> il – a ná yeve

3sg-past-talk fv with 3sg

‘ Salome talked to her, (her = Salome)

b) ??Salome  $\emptyset$  – e – uzh – á Mary zá yeve

3sg-past-tell fv about 3sg

‘ Salome told Mary about her, (her = Salome)

In this sentence her is ambiguous: it could refer to Salome, Mary, or someone else. The addition of mwinicozi to yeve would strongly favor the 'Salome' reading.

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) \*Mary  $\emptyset$  – e – on – a cithunzi kuvuli kwá yeve

3sg-past-see fv picture behind of 3sg

‘ Mary saw a picture behind her’ (her = Mary)

b) \*John ø – e – kalipish – á Mary kamba ká yeve  
 3sg-past-anger-fv because of 3sg  
 ‘ John angered Mary because of him’ (him = John)

Note: yeve is an independent pronoun which cannot be used in a possessor relation of the type ‘ X’ s back/behind’ implied in (a). Here a pronominal clitic – ke expressing possessor relation can be used as in the following:

c) Mary ø – e – on – a njôka kuvuli kwa-ke  
 3sg-past-see fv snake behind of-3sg.possessive  
 ‘ Mary saw a snake behind her’ (her = Mary)

4.1.2.4 Ditransitives - Can the strategy be used to indicate coreference between the two objects of a ditransitive verb? Give examples with the reflexive replacing each of the two objects. If there is more than one way to express the arguments of a ditransitive such as "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 C11, for example, for C11c, Bill gave Hal himself, which is admittedly pragmatically awkward, but imagine for C11a that Mary is showing Hal his image).

C11a) \*Mary ø- é – ónésh – á Hal kwá yeve  
 3sg-past-show-fv to 3sg  
 ‘ Mary showed Hal to him' (him= Hal)

b) \*Mary ø- é – ónésh – á yéve kwá Hal  
 3sg-past-show-fv 3sg to  
 ‘ Mary showed him to Hal' (him= Hal)

The reflexive strategy cannot be used to indicate coreference between two objects of a ditransitive verb in ciNsenga for the simple reason that reflexivization is morphologically

marked on the verb (with the meaning “ self-V” ) and signals co-reference between the subject NP and a direct object. There appears to be no way of expressing this in the way it is expressed in C11. The alternative would be to say “ Mary made Hal see himself” as shown below:

C11') Mary  $\emptyset$  – e – cit – ish – á kuti Hal a – zi – on – e  
 3sg-past-do – caus-fv that 3sg-refl-see-fv  
 ‘ Mary made Hal see himself’

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) Bill talked about Hal to X. (X = Hal) These have the same structure as the preceding section.

b) Mary talked about X to Hal. (X = Hal)

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.

By accident, it turns out that using 'his mother' to test binding of possessive pronouns hit upon a specialized set of morphemes.

C13a) Mary  $\emptyset$ - e – la $\hat{w}$  il – a na anyina  
 3sg-past-speak-fv with her/his.mother  
 ‘ Mary spoke with her mother’

C13a') John o – thand – a anyina  
 3sg-love-fv his.mother

‘ John loves his mother’

Note here that anyina means ‘ her/his mother’ and appears to be a lexicalized dependent on its antecedent (which we will call 'kinship anaphora') and the mother in question must be Mary's, just as it must be John in C13a'. Thus ‘ mother’ is realized by what appear to be different lexical items depending on whether one is talking about one' s own mother (amama), the mother of the (singular) addressee (anyoko), or the mother of a third person (anyina). Generally possession is not specified: however, where the possessor is plural is plural the possessor has to be specified, and in this case anyina is used for ‘ mother’ . In fact whenever the possessor is specified (as in X' s mother where X can be any variable) only anyina is used to refer to ‘ mother’ . The only other kinship relation that behaves this way is 'X;s father', such that atata is used for ‘ my father’ , awuso is used for 'your (sg) father', and awisi is used for 'his/her father'.

C13a". John o – nen – a kuti Mary o – thand – a anyina  
3sg-say-fv that 3sg-love-fv her.mother  
‘ John says that Mary loves her mother’  
??’ John says that Mary loves his mother’

CiNsenga, like other Bantu languages, makes no distinction between feminine and masculine gender, yet here *anyina* is not ambiguous: It can only be interpreted as Mary' s and not John' s mother – which suggests that there are some locality restrictions. Note though that if the possessive – *ake* is used here the sentence becomes rather ambiguous (though the local interpretation seems to be the more likely of the two).

C13a". John o – nen – a kuti Mary o – thand – a anyina w-ake

3sg-say-fv that 3sg-love-fv her.mother 3sg-poss

‘ John says that Mary loves her mother’

‘ John says that Mary loves his mother’

In fact the NP *anyina wake* here could corefer with some third person retrievable from the discourse context in C13a".

Now we return to the investigation of possessive pronouns that do not exhibit kinship anaphora.

b) Nick  $\emptyset$ - e – pesul – a sisi

3sg-past-comb-fv hair

‘ Nick combed (his) hair’ (his = Nick) Lit. ‘ Nick combed hair’

Note the Object Null strategy: the (assumed) anaphoric interpretation to Nick is obligatory here.

Note that in C13bi *zi* can be inserted into the verb complex and that *zi* corefers with Nick and not with sisi ‘ hair’ . This should not be surprising as *zi* invariably corefers with the subject NP.

b) Nick  $\emptyset$ - e – zi – pesul – a sisi

3sg-past-refl-comb-fv hair

‘ Nick combed himself’ Lit. ‘ Nick combed himself hair’

c) Nick  $\emptyset$ - e – la $\hat{w}$  il – a ná ábwána  $\hat{w}$  áke

3sg-past-speak-fv with boss 3sg.possess

‘ Nick spoke to his boss’ (his = Nick) (anaphoric interpretation to Nick is optional)

d) Nick ø- e – ik – a búkú láké pa thébulu  
3sg-past-put-fv book 3sg.posses on table

‘ Nick put his book on the table’ (his = Nick) (anaphoric interpretation to Nick is optional)

e) Nkhosi y- e – p – il – á Nick mphaso ku-munzi kwake  
king 3sg-past-give-applic-fv prize loc-village loc.3sg.possess

‘ The king gave Nick a prize in his village’ (his = Nick/the king)

f) alúmbwáná ŵ - e – samb – a ku-menso  
boys 3pl-past-wash-fv loc-face

‘ The boys washed (their) faces’ (their = boys) Lit. “ The boys washed faces’

There are also cases of possessor raising interpretation when it is OM pronoun that corresponds to the possessor, not *zi*.

C13'a) Asimbi ŵ - e – mu<sub>i</sub> – thyol – a kwanja mwana<sub>i</sub>  
girls 3pl-past-OM-break-fv hand child

‘ The girls broke the child’ s hand’

C13'b) Asimbi ŵ - e – mu<sub>i</sub> – guz – a malaya Shuko<sub>i</sub>  
girls 3pl-past-OM-break-fv shirt

‘ The girls pulled the Shuko’ s shirt’

It’ s important to point out here that in both sentences above, possessor and possessee lie in a part-whole relationship. In (C13'b) the girls pulled the shirt which Shuko was wearing at the time.

C14a) awisi a Nick o – ẑi – kúmbŵil – a  
father of 3sg-refl-admire-fv

‘ Nick’ s father admires himself’

ai) ??awisi a Nick ó – kúmbwil – á yeve

father of 3sg-admire-fv him

‘ Nick’ s father admires him’ (him = Nick) (him could also be some third party)

c) ??anyina a Nick ø- e – gulish – a gáfmoto yake

mother of 3sg-past-sell-fv car 3sg.possess

‘ Nick’ s mother sold his car’ (his = Nick) (him could also be some third party)

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.

ia. Maria ø – e – zî- kwápul - a

3sg-past-refl-whip-fv

‘ Maria whipped herself’

ib. Maria ø – é – kwápúl - á mwâna

3sg-past-whip-fv child

‘ Maria whipped the child’

ii.a. John ø – e – zî – w – ish – a

3sg-past-refl-fall-caus-fv

‘ John made himself fall’

iib. John ø – e – w – ish – a címuti

3sg-past-fall-caus-fv tree

‘ John felled a tree’ Lit. ‘ John caused the tree to fall’

iii. John o- zî- yénd – êl – a

3sg-refl-walk-applic-fv

‘ John walks by himself’

iiic. John ó – yénd – él – a mchiza

3sg-walk-applic-fv stick

‘ John walks with a stick’

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

reflexive

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

}

Passive not compatible with

### 4.1.3 Properties of antecedents

4.1.3.1 Pronouns, person and number - Consider all possible person/number combinations for the subject of the following sentence. (Once again, start with a predicate that allows use of the current strategy, if the verb meaning "see" does not). If there is any variation in judgements, provide examples for the entire paradigm. Otherwise, provide a couple of representative examples. However, in some languages, a strategy that works for singulars does not work for plurals (Danish, for example, shows such asymmetries), and in other languages, a strategy that works for third person does not work for first and/or second person.

- C16a) i. n – e – zî – on – a  
 1sg-past-refl-see-fv  
 ‘ I saw myself’
- ii. t – e – zî – on – a  
 1pl-past-refl-see-fv  
 ‘ We saw ourselves’
- iii. w – e – zî – on – a  
 2sg-past-refl-see-fv  
 ‘ You (sg) saw yourself’
- iv. mw – e – zî – on – a  
 2pl-past-refl-see-fv  
 ‘ You (pl) saw yourselves’
- v. ø – e – zî – on – a  
 3sg-past-refl-see-fv  
 ‘ she saw herself’
- vi. ŵ – e – zî – on – a  
 3pl-past-refl-see-fv  
 ‘ They saw themselves’

Number has no bearing on reflexive

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

C17a) n – e – sâmb – a \* This verb requires OBJECT NULL strategy

1sg-past-wash-fv

‘ I washed myself’

b) n – u – zî – nyany – a

1sg-pres-refl-hate-fv

‘ I hate myself’

c) ?n – e – uzh – á John zá newo

1sg-past-tell-fv about 1sg

‘ I told John about myself’ (me = I)

d) n – e – on – a njôka páfúpi ná newo

1sg-past--see-fv snake near with 1sg

‘ I saw a snake near me’

e)j \* n – ú – kónd – ew – a ná newo

1sg-pres-like-pass-fv by 1sg

‘ I am liked by me’

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) mbíí y – u – zî – welezh – a y-eka

history 3sg-pres-refl-repeat-fv 3sg-refl

‘ history repeats itself’

b) nsómbá iyi y – u – zî – ly – á y-eka

fish this 3sg-pres-refl-eat-fv 3sg-refl

‘ this fish eats itself’

c) ??mchini uwu ø – u – zî – cenek – a w-eka  
machine this 3sg-pres-refl-destroy-fv 3sg-refl

‘ This machine destroys itself’

The sentences, it has to be said, are not entirely ungrammatical without EKA: they are questionable on semantic grounds.

C18a') ?mbîfi y – u – zî – welezh – a  
history 3sg-pres-refl-repeat-fv  
‘ history repeats itself’

C18b') ?nsómbá iyi y – u – zî – ly – á  
fish this 3sg-pres-refl-eat-fv  
‘ this fish eats itself’

Sentence (C18b") for example would be okay without – *eka* if the fish was said to be eating a specified part of itself.

C18b") nsómbá iyi y – u – zî – ly – á ciphyephye  
fish this 3sg-pres-refl-eat-fv tail fin  
‘ This fish eats its own tail fin’

Note: Strategy A combines with – EKA strategy in the sentences above: different strategies would yield unacceptable constructions. Suppose two balls are spinning around out of control and they collide; If pronoun-eka appears, then it indicates that there is no outside causation. Leaving out – *eka* would allow for the possibility of there being some external causation.

C18'. mipila y – e – punth – an – a y-eka  
balls 3pl-past-bump- recip-fv 3pl-alone  
‘ The balls bumped/collided into each other’

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.

4.1.3.4 Quantifiers - Provide judgments for the following sentences.

C19a) ídódá ífílónse l – e – zí – on – a

Man every 3sg-past-refl-see-fv

‘ Every man saw himself’

b) mwáná áfíyénse ø – e – sâmb – a

child every 3sg-past-refl-wash-fv

‘ Every child washed himself’

c) wóphúnzila áfíyénse o – zí – nyany – a

student every 3sg-refl-hate-fv

‘ Every student hates himself’

d) ?mwáná áfíyénse ø – e – on – a njôka páfúpi ná-ye

child every 3sg-past-see-fv snake near with-3sg

‘ Every child saw a snake near him’ (him = child)

e) mwáná áfíyénse ø – e – la ŵ izh – á anyĩna

child every 3sg-past-talk.to-fv his.mother

‘ Every child talked to his mother’ (his = child)

Z1) mwáná áfíyénse ø – e – la ŵ izh – á mphunzisi w-ake

child every 3sg-past-talk.to-fv teacher 3sg-poss  
 ‘ Every child talked to his teacher’ (his = child)

f) \*awísí á mwána áfiyénse ó – kúmbwil – a yeve  
 father of child every 3sg-admire-fv 3sg  
 ‘ Every child’ s father admires him’ (him = child)

Repeat, replacing the quantifier "Every N" with "No N", and if any quantified antecedents behave differently from these, please provide the same paradigm.

Although ciNsenga has the equivalent of “ every N” , the language does not have the equivalent NP meaning “ No N” to serve as quantified antecedents. Instead, the language employs the expression: “ There is no X who...” to express the concept.

4.1.3.5 Questioned antecedents - X is coreferent with the wh-word in all of the following (if C20e is possible in your language). If your language leaves question words in situ, translate accordingly, and if your language allows both in situ and fronted questions, then provide examples of both possibilities and judgments for each of the coreference strategies.

C20a) \*ní ŵ ani ø – é – ón – á yeve  
 It.is who 3sg-past-see-fv 3sg  
 ‘ Who saw him?’ (him = who)

b) ní ŵ ani ø – é – sâmb – a (OBJECT-NULL STRATEGY IS FINE)  
 It.is who 3sg-past-wash-fv  
 ‘ Who washed himself?’

c) ??ní ŵ ani ø – é – ón – á njóká páfúpi náye  
 It.is who 3sg-past-see-fv snake near with.3sg

‘ Who saw a snake near him’ (him = who)

d) ní ŵ ani ø – é – láŵíl – a ná anyĩna  
It.is who 3sg-past-speak-fv with his.mother

‘ Who spoke with his mother?’ (his = who)

e) \*ní áwísí á ŵ ani ó – kúmbwíl – a yeve  
It.is father of who 3sg-admire-fv 3sg

‘ Whose father admires him?’ (him = whose)

Z2) \*ní mphunzisi wá ŵ ani ó – kúmbwíl – a yeve  
It.is teacher of who 3sg-admire-fv 3sg

‘ Whose teacher admires him?’ (him = whose)

4.1.3.6 Reverse binding - In the following examples, the full NP ('antecedent') appears in the lower (prototypically, object) position. Try to translate these into your language. It is expected that many sentences constructed in this section, possibly all, will be unacceptable. Naturally, any examples which are not ungrammatical are of particular interest. Assume X = Fred unless otherwise marked.

C21a) \*ø – é – ón – á yeve  
3sg-past-see-fv 3sg

‘ He saw him’ (him = he)

b) \*t – é – ón – á sewo  
1splpast-see-fv 1pl

‘ We saw us’ (us = we)

- c) \* $\emptyset$  – e – on – a njôka kuvuli kwá Fred  
 3sg-past-see-fv snake behind of  
 ‘ He saw a snake behind Fred’ (He = Fred)
- e) \*Bill  $\emptyset$  – e – la $\hat{w}$  il – a ná yeve zá Fred  
 3sg-past-speak-fv with 3sg about  
 ‘ Bill spoke with him about Fred’ (him = Fred)
- f) \*Bill  $\emptyset$  – e – uzh – á yeve zá Fred  
 3sg-past-tell-fv 3sg about  
 ‘ Bill told him about Fred’ (him = Fred)
- g) \* $\emptyset$  – e – tam – iw – a ná Fred  
 3sg-past-prasie-pass-fv by  
 ‘ He was praised by Fred’ (He = Fred)
- h) \*ú – kónd – éw – a ná wewo  
 2sg-like-pass-fv by you  
 ‘ You are liked by you’

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) \*yeve  $\emptyset$  – e – la $\hat{w}$  il – a ná anyiná á George  
 he 3sg-past-speak-fv with mother of  
 ‘ He spoke with George’ s mother’ (he = George)

- b) \*anyiná w-ake  $\emptyset$  – é – nzé  $\emptyset$  – é – fún – á kú – yávy – á

George

mother 3sg-poss 3sg-past-be 3sg-past-want-fv inf-help-fv

‘ His mother wanted to help George’ (his = George)

d) \*Mary ø – e – uzh – á anyiná w-ake zá George  
3sg-past-tell-fv mother 3sg.poss about

‘ Mary told his mother about George’ (his = George)

e) ??cithúnzí cá anyiná w-ake c – e – w – il – á George  
picture of mother 3sg.poss 3gs-past-fall-appl-fv

‘ A picture of his mother fell on George’ (his = George)

f) ?cithúnzí cá anyiná w-ake c – e – wamizh – á George  
picture of mother 3sg.poss 3gs-past-please-fv

‘ A picture of his mother pleased George’ (his = George)

Z22a) \*yeve ø – e – laŵ il – a ná mphunzisi wá George  
he 3sg-past-speak-fv with teacher of

‘ He spoke with George’ s teacher’ (he = George)

b) \*mphunzisi w-ake ø – é – nzé ø – é – fún – á kú – yávy – á

George

teacher 3sg-poss 3sg-past-be 3sg-past-want-fv inf-help-fv

‘ His teacher wanted to help George’ (his = George)

d) \*Mary ø – e – uzh – a mphunzisi w-ake zá George  
3sg-past-tell-fv mother 3sg.poss about

‘ Mary told his teacher about George’ (his = George)

e) ??cithúnzí cá mphunzisi w-ake c – e – w – il – á George

picture of teacher 3sg.poss 3gs-past-fall-appl-fv  
' A picture of his teacher fell on George' (his = George)

f) ?cithúnzî cá mphunzisi w-ake c – e – wamizh – á George  
picture of teacher 3sg.poss 3gs-past-please-fv  
' A picture of his teacher pleased George' (his = George)

The evidence from C22 and Z22 suggests that backward coreference is not natural in ciNsenga

In some languages, it is possible to scramble the positions of argument nominals so that objects can precede subjects, or perhaps the order of arguments in the VP is less fixed. In translating these cases we want you to preserve the linear order of X before its antecedent and providing a judgment accordingly, insofar as the unmarked word order of your language allows.

Please let us know, however, if word order in your language is fluid enough to scramble arguments in such a way that the linear order between X and its antecedent could change (e.g., in English, this would be a form of topicalization, such as John, his mother loves, which English informants do not always agree about). This we will not explore directly in this questionnaire, but we want to know in case we choose to do follow up research on this phenomenon.

#### 4.1.4 Some matters of interpretation

4.1.4.1 Distribution, reflexivity and reciprocity - Select and translate a simple example illustrating the using a clausemate coreference strategy successfully, such as C23.

C23) Azimai ŵ – e – ẑi - yavy – a  
women 3pl-past-refl-help-fv

‘ The women helped themselves’

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. **No**  
b) Each woman helps all of the women, including herself. **No (?)**  
c) Each woman helps at least some of the other women. **No**  
d) Each woman helps herself. **Yes**  
e) The women together as a group help the women together as a group. **Yes**

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

C25a) Azimai ŵ - e - zî - tam - a

women 3pl-past-refl-praise-fv **compatible with (d) and (e)**

‘ The women praised themselves’

b) Azimai ŵ á- ka - katizh - án - e

women 3pl-fut-support-recip-fv **compatible with (a), (b) and (c)**

‘ The women will support each other’

c) ) Azimai ŵ - e - zî - jambul - a

women 3pl-past-refl-photograp -fv **compatible with (d) and (e)**

‘ The women photographed themselves’

d) ) Azimai ŵ - e - zî - katish - a

women 3pl-past-refl-betray-fv **compatible with (d) and (e)**

‘ The women betrayed themselves’ Lit. ‘ The women got themselves

caught’

In light of these observations, which of the local coreference strategies in your language permit only reciprocal readings, which ones permit only reflexive readings, and which ones permit both?

Strategy A, Object Null, and – eka strategy permit reflexive readings; whereas reciprocal – an permits reciprocal reading: instances in which a strategy permits both readings are rare (or at least not immediately obvious).

If this strategy can have both reflexive and reciprocal readings, can you think of some predicates in which it is ambiguous? For example, in German, Die Kinderen wassen sich can mean either "the children are washing themselves" or "the children are washing each other."

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"

a) \*Khuzwayo ná Shuko ŵ – e – ẑi – kuman – a  
and 3pl-past-refl-meet-fv  
' Khuzwayo and Shuko met each other'

b) \*Khuzwayo ná Shuko ŵ – e – ẑi – on – a  
and 3pl-past-refl-see-fv  
' Khuzwayo and Shuko saw each other' (OK: ' Khuzwayo and Shuko

saw themselves)

- c) \*Khuzwayo ná Shuko ŵ – e – ẑi – timban – a  
and 3pl-past-refl-fight-fv  
' Khuzwayo and Shuko fought each other'

- d) \*Khuzwayo ná Shuko ŵ – e – ẑi – laŵ izha – a  
and 3pl-past-refl-talk.to-fv  
' Khuzwayo and Shuko talked to each other' (OK: ' .... talked to themselves' )

- a) \*Khuzwayo ná Shuko ŵ – e – ẑi – timba – a  
and 3pl-past-refl-hit-fv  
' Khuzwayo and Shuko hit each other' (OK: ' .... hit themselves' )

The verbs kumana “ meet” and timbana “ fight” are inherently reciprocal in ciNsenga and only have that reading. The reflexive strategy cannot be applied to such verbs.

b) Does the strategy allow the following constructions?

C27) John met/saw X with Bill (Meaning: "John and Bill met/saw each other.")

**NO**

c) Is there any contrast between C27a and C27b with respect to the acceptability of



Here, her is a direct object, and not an indirect object of the verb la izha ' talk to'

- a) \*John ná Mary ŵ – e – pa – an – a búkú ili ná yeve  
and 3pl-past-give- recip-fv book this with 3sg  
' John and Mary gave each other this book with her'

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"?

- C30) Bill ná Mary ŵ o – ganiz– a kúfi ŵ o – kond – an – a  
and 3pl-think-fv that 3pl-like- recip-fv  
' Bill and Mary think that they like each other'

Yes, this sentence has the meaning "Bill thinks he likes Mary, and Mary thinks she likes Bill"

## 4.2 Cross-clausal binding

Cases of coreference across clause boundaries fall into two major categories: in some cases, the coconstrual strategy permits relations between arguments in different clauses just in case the distance across clauses is determined by a relationship that is in principle local. 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.

The position of himself is taken to be uniquely the thematic subject of to win (not the object of expect, except for Case assignment), since other diagnostic tests show that the infinitive subject is uniquely selected by the lower predicate (as in examples such as John expects all hell to break loose, where all hell is never selected as an argument of any predicate except break loose in English). However, in this construction, which is relatively rare crosslinguistically, the antecedent of himself is still found in the local domain of its Case-assigner, expect and hence of the subject of expect. Other languages permit just the subject of a complement clause to be an anaphor anteceded by the matrix subject, but still the relation is very local. Slightly less local relations are possible in languages that permit anaphors, forms that must have a configurational antecedent, to find it in a higher clause if intervening clauses are all infinitives, as in Norwegian X5, or across subjunctive clauses, as in Icelandic X6 (if the intervening verbs are not subjunctive, then SIG cannot be used in X6).

X5) *Jon* bad oss forsøke å få deg til å snakke pent om *seg*.  
 Jon asked us try to get you to talk nicely about SEG  
 "Jon asked us to try to get you to talk nicely about him."

X6) Jón segir að Haraldur elski stúlkuna sem hafi kysst sig.  
 Jon said that Harald loves-SUBJ the-girl that kissed-SUBJ SIG  
 "Jon said that Harald loves the girl that kissed *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) *Zhangsan* shuo *Lisi* chang piping *ziji*  
 Zhangsan say Lisi often criticize ZIJI  
 "*Zhangsan* says that *Lisi* often criticizes *him*."

However, in many long distance antecedency cases like Chinese ziji, there are

quite a number of semantic and discourse conditions that appear to restrict the effect, or only permit it under certain interpretations. This section explores whether or not a given strategy permits a non-clausemate antecedent and if so, just how far away the antecedent can be and what sorts of conditions restrict it.

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

Please translate each example in this section choosing predicates that seem to most closely match the ones employed below. Check each strategy and supply judgments about the results. Don't forget to use the simple pronoun strategy, which in many languages may be the only one that works.

It may turn out that coconstrual across clauses will reveal a new strategy that does not correspond to any of the ones used up to now. For example, your language may require the use of a particular kind of pronoun to achieve coreference when the antecedent is the thematic believer, speaker or experiencer of a higher verb. A pronoun in a complement to such a verb may not be able to refer back to the antecedent unless it has a form that is not used for clausemate coreference in a matrix clause. If that is the case, then your language probably has "logophors". If you think this is so, say so and we will explore that at a later point.

If the strategy you are testing involves marking on the verb ("verbal reflexive"), take care to apply it to the embedded clause. In other words, the anaphoric argument should be in the embedded clause, its antecedent in the matrix clause. For example, in French, the reflexive clitic (which counts as a verbal affix in our empirical designation) is on the lower verb in X8 but its antecedent is Jean, the subject in the higher clause. As it happens, this relationship is unacceptable in French, at least with Jean as the antecedent.

X8)\*Jean a dit que Marie s'aime. (SE = Jean)

Jean has said that Marie SE loves  
"Jean said that Marie loves him."

In section 4.1.1.2, you will be asked to construct a sentence like X9, still with the meaning of X8.

X9)\*\*Jean s'a dit que Marie aime. (SE=Jean)  
Jean SE-has said that Marie loves  
"Jean said that Marie loves him."

It seems that the SE strategy in French is stubbornly local, in that the SE argument must be close to its thematic source (the object of the lower clause) and yet SE must be itself closer to its antecedent than embedding in a tensed sentence allows, so neither of these translations succeeds in French. What does succeed in French is X10 (but not X11).

X10) Jean a dit que Marie l'aime. (pronoun (clitic) = Jean)  
Jean has said that Marie him-loves  
"Jean has said that Marie loves him."

X11)\*Jean l'a dit que Marie aime. (pronoun (clitic) = Jean)  
Jean him-has said that Marie loves  
"Jean has said that Marie loves him."

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) Jack ø – e – nen – a kúfí yévé ni wócénjela

3sg-past-say-fv that 3sg be smart

‘ Jack said that he was smart’ (he = Jack)

b) Jack ó– ziŵ – a kúfí George o– mú – kond – a

3sg-know-fv that 3sg-OM-like-fv<sup>3</sup>

‘ Jack knows that George likes him’ (him = Jack)

c) ?Jack ó– ziŵ – a kúfí Bill ø – e – nen – a kúfí yévé ni wócénjela

3sg-know-fv that 3sg-past-say-fv that he be smart

‘ Jack knows that Bill said he was smart’ (he = Jack)

d) Jack ó– gániz – a kúfí Lisa o– ziŵ – a kúfí Wendy o– mú – kond

– a

3sg-think-fv that 3sg-know-fv that 3sg-OM-like-fv

‘ Jack thinks that Lisa knows that Wendy likes him’ (him = Jack)

(Could also mean “ Wendy likes Lisa” ; and this seems to be the more likely meaning)

e) Jack ó– gániz – a kúfí Lisa o– ziŵ – a kúfí yévé o– kond – a

Alice

3sg-know-fv that 3sg-know-fv that he 3sg-like-fv

‘ Jack thinks that Lisa knows that he likes Alice’ (he = Jack)

f) Sarah ø – e – uzh – a Jack kúfí Lisa o– mú – kond – a

3sg-past-know-fv that 3sg-OM-like-fv

‘ Sarah told Jack that Lisa likes him’ (him = Jack)

---

<sup>3</sup> OM stands for Object Marker: a pronominal affix on the verb. In this particular example, this seems to be the only strategy to permit coreference with Jack. The independent pronoun yeve (3sg) would be unacceptable for this purpose.

or

“ Sarah told Jack that Lisa likes her’ (her = Sarah)

g) Sarah  $\emptyset$  – e – uzh – a Jack kúfi yévé ó – kónd – a Wendy  
3sg-past-know-fv that he 3sg-like-fv

‘ Sarah told Jack that he loves Wendy’ (he = Jack)

(Could also mean “ Sarah loves Wendy” ; and this seems to be the more likely meaning)

**Note the revised judgments on (D1d) and (D1g) plus the additional comments**

If any of the above examples, or any analogous examples you provide, are grammatical using a particular coreference strategy, we consider this strategy to be a long-distance coreference strategy. Some subsequent questions depend on whether or not we are dealing with a long distance strategy. For this questionnaire, the term "long-distance strategy" includes ordinary pronouns, as in the French case above, as well as long-distance anaphors (sometimes these are forms used as local reflexives but that can also be used at a distance) and logophors.

Although there is no morphological marking of the distinction in English, sometimes a difference in factivity makes a difference for what we are studying and we want you to consider this difference. In English, verbs like admit presuppose that the proposition of what is admitted is true (e.g., John admitted that he was guilty implies that he was indeed guilty - adding "but he was mistaken" is very odd) while other verbs do not carry this presupposition (e.g. John suspected he was late, but he was mistaken is not at all odd). If this semantic distinction is marked morphologically in your language, please let us know for the following two "Jack" sentences, and if there is also an additional difference in which coreference strategies succeed, then provide as full a "Jack" paradigm for each verb type in accordance with what is possible.

CiNsenga does not make a morphological distinction here.

D2a) Jack  $\emptyset$  – e – vumel – a kúfi Mary o – mú – kond – a  
3sg-past-admit-fv that 3sg-OM-like-fv  
' Jack admitted that Mary loved him' (him = Jack)

b) Jack  $\emptyset$  – e – nzó – pénekel – a kúfi Mary o – mú – kond – a  
3sg-past-be-suspect-fv that 3sg-OM-like-fv  
' Jack suspected that Mary loved him' (him = Jack)

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

Consider what a list of major clause embedding types in your language would include. In English, it would include infinitives, gerunds, subjunctives (a lexically restricted class) and small clauses. In this subsection, we want you to construct sentences along the lines of those presented for tensed clauses above adjusting for the different complement clause type. Then test each clausal type for the success or failure of each coreference strategy.

For subjunctives, if your language permits them to have lexical subjects, the tests can probably proceed on the model of tensed clause complements. However, some of these clausal types require some adjustments if they require null subjects. For example, in providing data for infinitives, if your language has infinitives, we want you to give us a range of examples where the infinitive subject is not controlled by the matrix subject (where X = Edgar). In other words, the understood subject of the infinitive should never be Edgar.

**In all infinitive constructions in this language, the subject of the infinitive clause (which is**

always null) is controlled by the matrix subject. There are no other types of infinitive constructions to be found.

### 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.

Strictly, ciNsenga does not permit sentential subjects (i.e. where tense can be identified in such structures).

## 4.4 More on long distance anaphor strategies

Strategies that allow coreference across tensed clause boundaries, but where the marked argument is one that is not a typical pronoun, we will call "long distance anaphor strategies", hereafter, LDA strategies. In some languages, the LDA form is the same form that is used in clausemate anaphora, while in some cases, the LDA form is that of a pronoun of a special type.

It may be that the special pronoun has other uses, but in some languages a special pronoun of this type is particularly required when referring back to the reported speaker or believer (a logophoric antecedent). Such strategies are called "logophoric", and in some languages, this form of pronoun has only this use. Where logophoricity is involved, it is often (but not always) the case that the special pronoun must be associated with a local strategy. For example, where the local strategy consists of a pronoun associated with a body part, a body part might have to be associated with the logophoric form of the pronoun in order to achieve a reflexive reading, as in D12, where

all nominals refer to Olu.

D10) Olu said that he(log) saw himself(log).

In this section we test for known common properties of LDA and logophoric strategies, in particular, the range of restrictions that have been attested as applying to them in some languages.

4.4.1 Position of the antecedent - Long-distance coreference is often constrained in ways that local coreference is not (especially: subject-orientation). Which possible syntactic positions can be occupied by a long-distance antecedent of the current strategy? Construct examples and give judgments where X = Zeke.

D11a) Larry  $\emptyset$  – e – uzh – á Zeke kúfi Mike o – mú – kond – a íni  
3sg-past-tell-fv that 3sg-OM-like-fv NEG  
' Larry told Zeke that Mike does not like him' (him = Zeke)

b) Zeke  $\emptyset$  – e – uzh – á Larry kúfi Mike o – mú – kond – a íni  
3sg-past-tell-fv that 3sg-OM-like-fv NEG  
' Zeke told Larry that Mike does not like him' (him = Zeke)

c) Zeke  $\emptyset$  – e – uzh – á Larry kúfi yévé ó – kónd – a íni Mike  
3sg-past-tell-fv that he 3sg-like-fv NEG  
' Zeke told Larry that he does not like Mike' (he = Zeke)

d) Larry  $\emptyset$  – e – uzh – á Zeke kúfi yévé ó – kónd – a íni Mike  
3sg-past-tell-fv that he 3sg-like-fv NEG  
' Larry told Zeke that he does not like Mike' (he = Zeke)

(Could also mean " Larry does not like Mike" ; and this seems to be the more likely meaning)

e) Larry ó – ziŵ – a kúfi Zeke ó – gániz – á kúfi Mike o – mú –  
kónd – á fini

3sg-know-fv that 3sg-think-fv that 3sg-OM-like-fv

NEG

‘ Larry knows that Zeke thinks that Mike does not like him’ (him = Zeke)

f) Zeke ó – ziŵ – a kúfi Larry ó – gániz – á kúfi Mike o – mú – kónd  
– á fini

3sg-know-fv that 3sg-think-fv that 3sg-OM-like-fv

NEG

‘ Larry knows that Zeke thinks that Mike does not like him’ (him = Zeke)

D12a) \*Anyiná á Zeke ó – gániz – á kúfi Mike o – mú – kónd – á fini

Mother of Zeke 3sg-think-fv that 3sg-OM-like-fv NEG

‘ Zeke’ s mother thinks that Mike does not like him’ (him = Zeke)

b) \*Anyiná á Zeke ó – gániz – á kúfi yévé ó – kónd – á fini Mike

Mother of Zeke 3sg-think-fv that he 3sg-like-fv NEG

‘ Zeke’ s mother thinks that he does not like Mike’ (he = Zeke)

c) Zeke ó – gániz – á kúfi Mike o – mú – kónd – á fini

Zeke 3sg-think-fv that 3sg-OM-like-fv NEG

‘ Zeke thinks that Mike does not like him’ (him = Zeke)

d) \*Kálátá yá Zeke y – e – nen – a kúfi Mike o – mú – kónd – á fini

letter of Zeke 3sg-past-say-fv that 3sg-OM-like-fv NEG

‘ Zeke’ s letter said that Mike does not like him’ (him = Zeke)

e) Zeke ø – e – ci – mva – á kúfi Mary o – mú – kónd – á fini

Zeke 3sg-past-prt-hear-fv that 3sg-OM-like-fv NEG

‘ Zeke heard that Mary did not like him’ (him = Zeke)

f) Zeke  $\emptyset$  – e – uzh – iw – a kúfí Mary o – mú – kónd – á íni  
Zeke 3sg-past-tell-pass-fv that 3sg-OM-like-fv NEG

‘ Zeke was told that Mary did not like him’ (him = Zeke)

(D12a, b, and d) suggest that a non-commanding antecedent is not possible for pronouns in ciNsenga.

D13a) Zeke  $\emptyset$  – e – nen – a kúfí (yévé)  $\emptyset$  – e – zí – } vwalik – a  
Zeke 3sg-past-say-fv that (he) 3sg-past-refl-dress-fv  
‘ Zeke said that he dressed himself’  
} Strategy A used

here

b) Zeke  $\emptyset$  – e – nen – a kúfí (yévé)  $\emptyset$  – e – zí – cit – a  
Zeke 3sg-past-say-fv that (he) 3sg-past-refl-harm-fv

‘ Zeke said that he harmed himself’

The object null strategy can be used for the analogue of (D13a) so long as the verb remains in its base form.

D13c) Zeke  $\emptyset$  – e – nen – a kúfí (yévé)  $\emptyset$  – e – vwâl – a  
Zeke 3sg-past-say-fv that (he) 3sg-past--dress-fv

‘ Zeke said that he dressed himself’

#### 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.

4.4.2.2 Quantified antecedents - Review the examples in the Jack, Zeke and Edgar paradigms, replacing these names with "every child" and "no child" or "many children". Report all examples that differ in acceptability from the examples you have already provided for those paradigms. If there are no differences, just provide a few representative examples.

Note: Try overt and null pronouns as the coreferent NP if your language has both.

4.4.2.3 Split antecedents - Sometimes coreference is permitted when the antecedents for the anaphor or pronoun are separate arguments. Please provide examples that correspond to those in the Ozzie (male) and Harriet (female) paradigm. In all cases, X = Ozzie and Harriet (together).

D14a) \*Ozzie  $\emptyset$  – e – la $\hat{w}$  il – a z $\acute{a}$  Harriet kw $\acute{a}$   $\hat{w}$  eve

3sg-past-ttalk-fv about to them

‘ Ozzie talked about Harriet to them’ (them = Ozzie & Harriet)

b) \*Ozzie  $\emptyset$  – e – la $\hat{w}$  il – a z $\acute{a}$   $\hat{w}$  eve kw $\acute{a}$  Harriet

3sg-past-ttalk-fv about to them

‘ Ozzie talked about them to Harriet’ (them = Ozzie & Harriet)

c) Ozzie  $\emptyset$  – e – uz $\hat{h}$  –  $\acute{a}$  Harriet k $\acute{u}$ f $\acute{i}$   $\hat{w}$   $\acute{e}$ v $\acute{e}$   $\hat{w}$   $\acute{a}$  – ny $\acute{a}$ m $\acute{u}$ k – e

3sg-past-tell-fv that they 3pl-leave-fv

‘ Ozzie told Harriet that they should leave’ (they = Ozzie & Harriet)

d) Ozzie  $\emptyset$  – e – uz $\hat{h}$  –  $\acute{a}$  Harriet k $\acute{u}$ f $\acute{i}$  Bill o –  $\hat{w}$   $\acute{a}$  – nyany – a

3sg-past-tell-fv that 3sg-OM-dislike-fv

‘ Ozzie told Harriet that Bill dislikes them’ (them = Ozzie & Harriet)

e) Ozzie  $\emptyset$  – e – nen – a k $\acute{u}$ f $\acute{i}$  Harriet  $\acute{o}$  – g $\acute{a}$ niz –  $\acute{a}$  k $\acute{u}$ f $\acute{i}$  Bill o –  $\hat{w}$   $\acute{a}$  –

nyany – a

3sg-past-say-fv that 3sg-think-fv that 3sg-OM-dislike-fv  
' Ozzie said that Harriet thinks that Bill dislikes them' (them = Ozzie & Harriet)

#### 4.4.3 Blocking Effects

The agreement features of nominals intervening between an anaphor and its antecedent can affect the grammaticality of coconstrual.

4.4.3.1 Features of intervening subjects - The following examples test for an intervening subject that is mismatched for person, gender, or number. Construct more examples if you suspect that other feature combinations are relevant in your language. In each case in D19, X = Larry, unless designated otherwise.

D19a) Larry ó – gániz – á kúfí John o – mú – lémék – a  
3sg-think-fv that 3sg-OM-respect-fv  
' Larry thinks that John respects him' (him = Larry)

b) Larry ó – gániz – á kúfí (néwó) nu – mú – lémék – a  
3sg-think-fv that I 1sg-OM-respect-fv  
' Larry thinks that I respect him' (him = Larry)

c) Larry ó – gániz – á kúfí Mary o – mú – lémék – a  
3sg-think-fv that 3sg-OM-respect-fv  
' Larry thinks that Mary respects him' (him = Larry)

d) Larry ó – gániz – 'a kúfí alúmbwáná ŵ o – mú – lémék – a  
3sg-think-fv that boys 3pl-OM-respect-fv  
' Larry thinks that the boys respect him' (him = Larry)

e) Mádódá wó – gániz – á kúfi alúmbwáná wó – wá – lémék – a  
 men 3pl-think-fv that boys 3pl-OM-respect-fv  
 ‘ The men think that the boys respect them’ (them = the men)

D20a) Larry ó – gániz – á kúfi Bill ó – ziw – á kúfi Dave o – mú – lémék  
 – a

3sg-think-fv that 3sg-know-fv that 3pl-OM-respect-fv  
 ‘ Larry thinks that Bill knows that Dave respects him’ (him = Larry)

b) Larry ó – gániz – á kúfi (néwó) nú – ziw – á kúfi Dave o – mú –  
 lémék – a

3sg-think-fv that I 1sg-know-fv that 3pl-OM-respect-fv  
 ‘ Larry thinks that I know that Dave respects him’ (him = Larry)

c) Larry ó – gániz – á kúfi Mary ó – ziw – á kúfi Dave o – mú –  
 lémék – a

3sg-think-fv that 3sg-know-fv that 3pl-OM-respect-fv  
 ‘ Larry thinks that Mary knows that Dave respects him’ (him = Larry)

d) Larry ó – gániz – á kúfi alúmbwáná wó – ziw – á kúfi Dave o –  
 mú – lémék – a

3sg-think-fv that boys 3pl-know-fv that 3pl-OM-  
 respect-fv

‘ Larry thinks that the boys know that Dave respects him’ (him = Larry)

e) Mádódá wó – ganiz – á kúfi alúmbwáná wó – ziw – á kúfi Dave o  
 – wá – lémék – a

men 3pl-think-fv that boys 3pl-know-fv that 3sg-OM-  
 respect-fv

‘ The men think that the boys know that Dave respects them’ (them = the men)

4.4.3.2 Positions of the intervener - The above interveners were subjects (the most common case). We now look for interveners in other positions.

The following examples rely only on person mismatches (where X = Walter). If you also found number or gender mismatches above, give some examples.

D21a) Walter ó – gániz – á kúfi Bill ø – e – uzh – á Harry kúfi Dave o – mú – lémék – a  
3sg-think-fv that 3sg-past-tell-fv that 3sg-OM-respect-fv

‘ Walter thinks that Bill told Harry that Dave respects him’ (him = Walter)

b) Walter ó – gániz – á kúfi Bill ø – e – ní – uzh – á kúfi Dave o – mú – lémék – a  
3sg-think-fv that 3sg-past-OM-tell-fv that 3sg-OM-respect-fv

‘ Walter thinks that Bill told me that Dave respects him’ (him = Walter)

c) Walter ø – e – ní – uzh – á kúfi Dave o – mú – lémék – a  
3sg-past-OM-tell-fv that 3sg-OM-respect-fv

‘ Walter told me that Dave respects him’ (him = Walter)

d) ??Walter ø – e – nen – a kúfi Dave ø – e – ní – p – á búkú lá yeve  
3sg-past-say-fv that 3sg-past-OM-give-fv book about him

‘ Walter said that Dave gave me a book about him’ (him = Walter)

#### 4.4.4 Islands

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

D22a) Ira ó – nyány – á kúfi Mary o – mú – nyany – a  
3sg-hate-fv that 3sg-OM-hate-fv

‘ Ira hates (the fact) that Mary hates him’ (him = Ira)

b) Ira ó – lémək – a munthu w-améné ó – mú – kond – a  
3sg-respect-fv person agr-REL 3sg-OM-like-fv

‘ Ira respects the man who likes him’ (him = Ira)

c) Ira ó – nén – á kúfi munthu w-améné ó – mú – kond – a ni wá  
nzelu

3sg-say-fv that person agr-REL 3sg-OM-like-fv COP of  
intelligence

‘ Ira says that the man who likes him is intelligent’ (him = Ira)

d) Ira ø – e – konsh – a ngati Bill ø – e – mú – on – a  
3sg-past-ask-fv whether 3sg-past-OM-see-fv

‘ Ira asked whether Bill saw him’ (him = Ira)

e) Ira ø – e – konsh – a kúfi Bill ø – e – mú – on – a lini  
3sg-past-ask-fv that 3sg-past-OM-see-fv when

‘ Ira asked when Bill saw him’ (him = Ira)

f) Ira a – li – ye zindikil – e kúfi George ø – e – mú – konk – a

3sg-be-neg realize-fv that 3sg-past-OM-follow-fv  
 ‘ Ira did not realize that George followed him’ (him = Ira)

g) Ira ø – e – nen – a kúfi Mary ni wó-byeta ná kúfi á – ká – mú –  
 lúngúl – e  
 3sg-past-say-fv that be agr-pretty and that 3sg-fut-OM-marry-fv  
 ‘ Ira said that Mary was pretty and that he would marry her’ (her = Mary)

#### 4.4.5 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 Pavarotti is aware that the pants which are on fire are his. If Pavarotti has a belief about pants he knows to be his, then D23 could be said to describe this situation. This is a *de se* interpretation, since Pavarotti knows the pants in question are his own.

D23) Pavarotti believes X's pants are on fire.

Now suppose Pavarotti is standing in a line of men stretching to his right and left and facing them is a long horizontal waist high mirror. Everyone is wearing the same sort of pants and Pavarotti is not sure which reflected pants are his. Now suppose Pavarotti sees one pair of pants burning and laughs out loud saying "that guy's pants are on fire", but he does not realize he is speaking of his own pants. This is a non-*de se* reading of D23, but one in which Pavarotti and the owner of the pants are nonetheless coreferent. Do any of your long distance or pronominal strategies distinguish these two readings (allowing only one of the readings) for cases like D23 or D24 in translations you provide?

D24a) Pavarotti said that X would sing the aria.

b) Pavarotti believes that the audience loves X.

If the antecedent of a person is aware of a description or statement, this description or statement can contain a reflexive that has this person as its antecedent.

If you don't understand what is asked for in this section, skip it or ask for assistance.

It's not at all clear what the significance of this section would be. In this language (as must be clear by now) X in (D24a & D24b) would be ambiguous: it would refer to Pavarotti or to someone else, irrespective of Pavarotti's state of belief.