

**Anaphora in the African Languages - BCS-0303447**  
**Anaphora Questionnaire version 2.2**  
**Consultant – Mamadou Bassene**  
**Elicitor – Ken Safir**

**PART 2 An inventory of reflexive and reciprocal strategies**

**2.1 Coreference in a single clause**

2.1.1 "Primary" reflexive strategy -

The most productive marker of reflexive readings in Eegimaa is the suffix *-oro* which we will refer to as RFM (reflexive marker) since it is an affix on roots. In Eegimaa, There are also two other reflexive markers and these are the suffix *-o* which will be referred to as IRF (inherent reflexive) and the suffix *-or* to be referred to as RCM, since it is an affix on roots which induces reciprocal readings (although it has other readings – see below).

- R<sub>1</sub>(a) Tani na-ssol-o-e  
Tani SM.3rd.SG-hurt-IRF-PFV  
'Tani hurt herself' (accidentally)
- (b) Tani na-ssol-oro-e  
Tani SM.3rd.SG-hurt-RFM-PFV  
'Tani hurt herself' (consciously)
- (c) Bala na-ccig-o-e  
Bala SM.3rd.SG-shave-IRF-PFV  
'Bala shaved'
- (d) Bala na-ccig-oro-e  
Bala SM.3rd.SG-shave-RFM-PFV  
'Bala shave himself' (Bala didn't go to a barber or anyone to have his hair cut.  
He did it himself)
- (e) Ban (inje) i-raw-or  
Fut PRN.1st.SGSM.1st.SG-stetch-RCM  
'I will stretch'
- (f) Ban (inje) i-raw-oro  
Fut PRN.1st.SGSM.1st.SG-stetch-RFM  
'I will stretch myself.'

COMMENT: With the morpheme *-oro*, it is clear that the agent performs some action on themselves and all the verbs derived with this morpheme always convey such a meaning. With the morpheme *-o*, the action is not always clearly reflexive. For instance in (c), Bala could have gotten a haircut by visiting the barber or by having a friend do it for him. But with *-oro*, it's absolutely clear that he did it himself. As for *-or*, wherever it expresses reflexivity, it clearly does

so and in that case, the difference between *-or* and *-oro* is just a matter of emphasis, with *-oro* being more emphatic. However, *-or* does not always express reflexivity. In some cases, it derives words which express an action performed repeatedly. In other cases, it derives reciprocal verbs.

R<sub>2</sub>(a) Bala (bugo) ni Tani gu-tteg-or-e  
 Bala PRN.3rd.PL CONJ Tani SM.3rd.PL-beat-RCM-PFV  
 ‘Bala and Tani beat each other.’

(b) Bala (bugo) ni Satu gu-ssaf-or-ut  
 Bala PRN.3rd.PL CONJ Satu SM.3rd.PL-great-RCM-NEG  
 Bala and Satu didn’t great each other.’

(c) Satu na-gab-or-il su-ol  
 Satu SM.3rd.SG-share-REP-3<sup>rd</sup>.PL.OBJ C4-fish  
 ‘Satu shared fish with them’ (lit: Satu distributed fish to them).

COMMENT: The word *fu-gab* in Eegimaa means a share and the verb *e-gab-or* literally mean to distribute shares. In this case the morpheme *-or* describes an action performed repeatedly. We have also seen in (a) and (b) that *-or* also derives words with a reciprocal meaning. For more on this, please see §2.3.

2.1.2 Is there another way, or are there other ways, to express coreference in A1 (that is, with the verb see held constant)?

See the discussion above. More will be provided on the reciprocal strategy in §2.3.

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.

COMMENT: In Eegimaa, such English verbs as "wash", "shave", and "bathe", "dress" which inherently convey a reflexive meaning are derived with the IRF strategy. As discussed above, this strategy does not always mean that the subject of the verb is actually the one who performs the action on himself/herself. If this type of precision is to be provided, then the *oro-self* is used with these verbs.

**KS: I am not sure I understand ‘not actually the one who performs the action on himself/herself’**

Do any of the following (or any other verbs you can think of) involve a strategy that you have not listed already? If so, give an example now and label it with a new name (or letter).

A2a) John washes himself.  
 Jon<sup>1</sup> na-uw-o<sup>1</sup>-e  
 Jon SM.3rd.SG-wash-RFM-PFV

**KS: We should discuss whether or not we want to put the class marker an x superscript when the noun it is on is unmarked for class, even though agreement is only compatible with a verb of class x. Since the reflexive is itself, invariant for class, I don’t see any reason to mark it for class.**

b) Mary cut herself. [accidentally]  
 Mari<sup>1</sup> na-ib-o<sup>1</sup>-e

Mari SM.3<sup>rd</sup>.SG -cut-RFM-PFV

- c) John is ashamed of himself.  
Jon<sup>1</sup> na-kan-oro<sup>1</sup>-e      ñu-ssu  
Jon SM.3<sup>rd</sup>.SG-do-RFM-PFV CL-shame
- d) John destroyed himself.  
Jon<sup>1</sup> na-gal-en-oro<sup>1</sup>-e  
Jon SM.3<sup>rd</sup>.SG-destroy-CAUS-RFM-PFV
- e) We hate ourselves.  
(Woli<sup>1</sup>)      ji-lal-oro<sup>1</sup>-e  
PRN.1<sup>st</sup>.PL SM.1<sup>st</sup>.PL-hate-RFM-PFV
- f) They praise themselves  
(Bugo<sup>1</sup>)      gu-sad-oro<sup>1</sup>-e  
PRN.3<sup>rd</sup>.PL SM.3<sup>rd</sup>.PL-praise-RFM-PFV

COMMENT: In (A2e and A2f) above, the main subject pronouns are put in parentheses because in Eegimaa, these pronouns are often omitted because there always is an agreement morpheme attached to the verb which provides information about the subject. Also, in many cases, using the main subject pronoun give the sentence an emphatic reading. In this questionnaire, the main subject will consistently be put in parentheses.

#### 2.1.4 Obliques and other argument types -

A3a) John spoke to Mary.

Jon na-lob-e      ni Mari  
Jon SM.3<sup>rd</sup>.SG-speak-PFV CON Mari

b) John spoke about himself. (subject/PP argument)

Jon<sup>1</sup> na-lob-e      m-ola<sup>1</sup>  
Jon SM.3<sup>rd</sup>.SG -speak-PFV CL-3<sup>rd</sup>.SG.POSS

c) John told Mary about himself. (same, with intervening NP)

Jon<sup>1</sup> na-lob-e      m-ola<sup>1</sup>      Mari<sup>2</sup>  
Jon SM.3<sup>rd</sup>.SG -speak-PFV CL-3<sup>rd</sup>.SG.POSS Mari

COMMENT: Please note that the order between *mola* and *Mari* is very important here. If you switch them, you get the reading ‘John told Mary about herself’. You can also have *mola* right after John, in which case *mola* is emphasized and convey the meaning ‘it was about himself that John told to Mary’, meaning that John did not tell to Mary anything else but about himself.

d) Bill told us about ourselves. (object/argument)

Bil<sup>1</sup> na-lob-oli<sup>2</sup>      m-ololi<sup>2</sup>  
Bil SM.3<sup>rd</sup>.SG-speak-1<sup>st</sup>.PL.OBJ CL-1<sup>st</sup>.PL.POSS

e) Mary gave the children themselves. (ind.object/object)

Mari<sup>1</sup> na-sen-e      u-ññil<sup>2</sup> wawu fanga-il<sup>2</sup>

Mari SM.3rd.SG-give-PFV CL-chil DEF EMPH-3<sup>rd</sup>.PL.POSS

f) Mary saw a book behind her. (subject/locative)

Mari<sup>1</sup> na-jug-e é-l-libur bú-sol-ol<sup>1</sup>  
Mari SM.3rd.SG-see-PFV CL-book CL-back-3<sup>rd</sup>.SG.POSS

g) John bought the book for himself. (benefactive)

Jon<sup>1</sup> na-nnom-oro<sup>1</sup>-e é-l-libur  
Jon SM.3rd.SG-buy-RFM-PFV CL-book

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:

A4a) Etta likes herself.

Etta<sup>1</sup> na-mang-oro<sup>1</sup>-e  
Etta SM.3rd.SG-like-RFM-PFV

b) Etta scares herself.

Etta ná-xoll-en-oro-e  
Etta SM.3rd.SG-scare-CAUS-RFM-PFV

c) Etta worries herself.

Etta na-kan-oro-e ga-pinor  
Etta SM.3rd.SG-make-RFM-PFV CL-thought

2.1.5 Person and number - Some languages use different strategies depending on person or number.

COMMENT: Person and number do not affect the choice of strategy.

A5a) I saw myself.

(Inje) ni-jug-oro-e  
PRN.1<sup>st</sup>.SG SM.1st.SG-see-RFM-PFV

b) You cut yourself [accidentally].

(Au) nu-ib-o-e  
PRN.2<sup>nd</sup>.SG SM.2nd.SG-cut-IRF-PFV

c) We will wash ourselves.

(Wóli) pan ju-pos-o  
PRN.1<sup>st</sup>.PL FUT SM.1st.PL-wash-RFM

d) You must help yourselves.

(Au) u-ramben-oro  
PRN.2<sup>nd</sup>.SG SM.2nd.SG-help-RFM

2.1.6 Strategies for other clausemate environments -

(a) Is there any strategy which is only possible with some special aspectual class of a verb?  
COMMENT: See the discussion in §2.1.1 and in §2.1.3.

A6a) Peter knows himself.

Píta<sup>1</sup> na-ffas-oro<sup>1</sup>-e  
Píta SM.3rd.SG-know-RFM-PFV

b) Peter (habitually) criticizes himself.

Píta<sup>1</sup> ná-gising-oro<sup>1</sup>-e  
Píta SM.3rd.SG-criticize-RFM-PFV

c) Peter is likely to praise himself.

Píta<sup>1</sup> nono ti pan a-sal-oro<sup>1</sup>  
Píta MOOD COMP FUT SM.3rd.SG-praise-RFM-PFV

KS: In elicitation, this came out as ‘Peter looks like he’s going to praise himself’

(b) Do quantificational constructions involve a separate strategy?

COMMENT: No

A7a) Every boy looked at himself.

Ápur<sup>1</sup> anoan na-lluj-oro<sup>1</sup>.  
boy every SM.3rd.SG-look-RFM

b) All the women described John to themselves.

W-aare<sup>1</sup> wawu pe gu-ggitten-oro<sup>1</sup>-e Jon bu na-no-e  
CL-woman DEF all SM.3rd.PL-tell-RFM-PFV Jon how SM.3rd.SG-be-PFV

c) Every teacher introduced himself to Bob.

Á-muse anoan na-ggitten-e ga-jaw-ol Bob  
CL-teacher every SM.3rd.SG-tell-PFV CL-name-3<sup>rd</sup>.SG.POSS Bob

d) Some children only help themselves.

U-ññil<sup>1</sup> gu-ce bugo nevvon-il ni gu-ramben-or<sup>1</sup>  
CL-child CL-some PRN.3<sup>rd</sup>.PL only-3<sup>rd</sup>.PL.POSS CON SM.3rd.PL-help-RCM

(c) If your language has a system of grammaticized honorifics, do some types of honorific allow a strategy that has not been listed yet?

COMMENT: No such strategy.

(d) The above were all tensed main clauses. Experiment with placing both coreferring arguments in various types of subordinate clauses, as your language allows.

A9a) Sol says that Alice loves herself.

b) Sol required that Alice praise herself.

c) Sol thought Alice should praise herself.

d) Sol asked Alice to praise herself.

e) Sol wants to praise himself.

f) Sol expects Alice to praise herself.

g) Sol heard Alice praising herself.

COMMENT: Same strategies as the ones already reported.

## 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) I spoke with Abraham yesterday. He saw Lela.

(Inje) ni-lob-e ni Aburaham figen. Na-jug-e Lela  
 PRN.1st.SGSM.1st.SG-speak-PFV PREP Abraham yesterday SM.3rd.SG-see-PFV Lela

b) Where is Abraham? I saw him in the market.

Aburam umela? Ni-jug-ol ni marise yai  
 Abraham where SM.1st.SG-see-3rd.SG.OBJ PREP market DEF

c) We saw you. Did you see me/us?

(Inje) ni-jug-i. Nu-jug-om/óli?  
 PRN.1st.SGSM.1st.SG-see-2<sup>rd</sup>.SG.OBJ SM.2nd.SG-see-1<sup>st</sup>.SG.OBJ/1<sup>st</sup>.PL.OBJ

COMMENT: In all the three sentences, the main subject is not needed since it is clear from the context who the subject agreement marker is referring to. For a comprehensive list of Eegimaa subject and object markers, please see table 1.

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

Table 1: Eegimaa subject and object markers

Person & number	Subjects	SM	Personal Object	Others	Examples
1 <sup>st</sup> .SG	inje	ni- ~ i-	-om		na-sen-om 's/he gave me'
2 <sup>nd</sup> .SG	au	nu- ~ u-	-i		na-sen-i 's/he gave you'
3 <sup>rd</sup> .SG	açila / o	na- ~ a-	-ol	-o <sup>1</sup>	na-sen-ol 's/he gave him/her'
1 <sup>st</sup> .PL (EXCL)	woli	ju- ~ ji-	-oli		na-sen-oli 's/he gave us'
1 <sup>st</sup> .PL (INCL <sup>2</sup> )	wola~-a	nu- ~ u-	-ola		na-sen-ola 's/he gave us'
1 <sup>st</sup> .pl (INCL <sup>3</sup> )	Wolal~-al	nu- ~ u-	-olal		na-sen-olal 's/he gave us'
2 <sup>nd</sup> .PL	buro	ju- ~ ji-	-ul		na-sen-ul 's/he gave you'
3 <sup>rd</sup> .PL	bugo	gu-	-il	-o	na-sen-il 's/he gave them'

The morphemes referred to as SM (subject markers) are subject agreement markers. As mentioned in §2.1.3, in Eegimaa the subject is not required as long as the context is clear.

<sup>1</sup> -o can only refer to nonhuman objects

<sup>2</sup> Wola~-a refers to the speaker and the addressee only.

<sup>3</sup> Wolal~-al refers to the speaker, the addressees or the speaker, the addressee and others.

However, the subject marker is required. Also note that in Eegimaa, the morphemes for personal object pronouns are identical to the possessive markers

2.2.3 Null arguments - If your language allows argument drop (null pronouns, or pro-drop) as a pronominalization strategy in simple (single clause) sentences, then name it here as an additional pronominalization option.

COMMENT: Subjects, as has been mentioned all along are usually dropped. Objects may be dropped specially circumstances. For instance with certain verbs (eat 'etiñ', cook 'éssil') it's clear from cultural knowledge what you are eating/cooking because with traditional Eegimaa dishes, if you are cooking eating anything other than sinning 'cooked rice', you going to use a different verb. It must be noted that the Eegimaa verbs for 'eat' and 'cook' are now being used when it comes to cooking or eating certain types of foreign food and this reduces the possibility for object dropping.

A10d) Ate fish. (meaning *he/she/they/it/we/you/I ate fish*)

\*Ate ju-ol

Ate CL-fish

COMMENT: The Eegimaa sentence in (A10d) means 'Ate is a fish', instead of the intended English meaning.

e) Hal hit (meaning *Hal hit him/her/them/it/us/you/me*)

\*Hal na-tteg-e

Hal SM.3rd.SG-hit-PFV

f) Hal talked to (meaning *Hal talked to him/her/them/it/us/you/me*)

\*Hal na-lob-e                    ni

Hal SM.3rd.SG-talk-PFV PREP

2.2.4 The use of otherwise independent pronouns for clausemate anaphora

Even if your language has a special strategy for local anaphora, as English does (e.g., the use of pronoun-*self*), we still need to know whether or not a simple pronoun, a pronoun that could be used in contexts like those in (A10a-c), could also be used to form a reflexive reading.

A10g) Ali praised him.

Ali<sup>1</sup> na-sal-ol<sup>2</sup>

Ali SM.3rd.SG-praise-3<sup>rd</sup>.SG.OBJ

h) Ali liked him.

Ali<sup>1</sup> na-mang-ol<sup>2</sup>

Ali SM.3rd.SG-like-3<sup>rd</sup>.SG.OBJ

i) Ali saw him

Ali<sup>1</sup> na-jug-ol<sup>2</sup>

Ali SM.3rd.SG-see-3<sup>rd</sup>.SG.OBJ

j) Ali talked to him

Ali<sup>1</sup> n-alob-e                    ni    o<sup>2</sup>  
Ali SM.3rd.SG-talk-PFV PREP 3<sup>rd</sup>.SG.OBJ

k) Ali sent a book to him.

Ali<sup>1</sup> na-boñ-ol<sup>2</sup>                    é-l-libur  
Ali SM.3rd.SG-send-3<sup>rd</sup>.SG.OBJ CL-book

l) Ali helped him

Ali<sup>1</sup> na-ramben-ol<sup>2</sup>  
Ali SM.3rd.SG-help-3<sup>rd</sup>.SG.OBJ

m) Ali surprised him

Ali<sup>1</sup> na-ññoben-ol<sup>2</sup>  
Ali SM.3rd.SG-surprise-3<sup>rd</sup>.SG.OBJ

n) Ali bought a book for him

Ali<sup>1</sup> na-nnom-ol<sup>2</sup>                    é-l-libur  
Ali SM.3rd.SG-buy-3<sup>rd</sup>.SG.OBJ CL-book

o) Ali read a book about him

Ali<sup>1</sup> na-janga-e                    é-l-libur-ol<sup>1/2</sup>  
Ali SM.3rd.SG-read-PFV CL-book-3<sup>rd</sup>.SG.POSS

COMMENT: Eegimaa sentence in A10o is quite ambiguous. It can mean that ‘Ali read his book’ (a book which belongs to him), ‘Ali read the book about himself’ (the book written about Ali), ‘Ali read someone else’s book’ (a book which belongs to someone else), or ‘Ali read a book about someone else’ (a book written about someone else).

p) Ali found a book near him

Ali na-jug-e                    é-l-libur    ni    ga-lamb-ol<sup>1/2</sup>  
Ali SM.3rd.SG-see-PFV CL-book PREP CL-side-3<sup>rd</sup>.SG.POSS

COMMENT: Eegimaa sentences in (A10g-n) are only acceptable if and only if the direct object pronoun -ol/o ‘him’ does not refer to Ali.

## 2.3 Reciprocal Readings

2.3.1 If you have already listed a reflexive strategy that can also have reciprocal meaning, provide an example here with a reciprocal translation.

COMMENT: As mentioned earlier, in Eegimaa the morpheme *-or* also derives words with a reciprocal meaning.

R<sub>3</sub>(a) Ali<sup>1</sup> ni    Musa<sup>2</sup> gu-tteg-or<sup>12</sup>-e  
Ali CON Musa SM.3rd.PL-beat-RCM-PFV  
‘Ali and Musa beat each other.’



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.

A11a) The women see each other.

W-aare wawu gu-jug-or-e  
c18-woman c18.def SM.3rd.PL-see-rcm-PFV

b) The boys washed each other.

Ú-pur wawu gu-pos-or-e  
c8-boy c8.def SM.3rd.PL-wash-rcm-PFV

c) The men combed each other's hair.

W-áine wawu gu-peñe-or-e w-al-il  
c18-man c18.def SM.3rd.PL-cumb-rcm-PFV c18-hair-3<sup>rd</sup>.pl.poss

d) They argued with each other.

(Bugo) gú-rig-e  
prn. 3<sup>rd</sup>.pl SM.3rd.PL-argue-PFV

or

(Bugo) gú-rig-en-or-e  
prn. 3<sup>rd</sup>.pl SM.3rd.PL-argue-caus-rcm-PFV

e) The boys kicked each other.

Ú-pur wawu gu-pa-or-e  
c8-boy c8.def SM.3rd.PL-kick-rcm-PFV

f) They hate each other.

(Bugo) gu-lal-or-e  
prn. 3<sup>rd</sup>.pl SM.3rd.PL-hate-rcm-PFV

2.3.3 Oblique arguments - Continue looking for new reciprocal strategies by translating sentences like those in (A12), which involve reciprocals embedded in prepositional phrases. If your language has prepositions and these examples do not translate as having reciprocals embedded in prepositional phrases, then please provide examples from your language that do.

A12a) The men introduced Bill to each other.

W-áine wawu gu-kan-or-e Bil min gu-ffas-or  
c18-man c18.def SM.3rd.PL-make-rcm-PFV Bill comp SM.3rd.PL-know-rcm

b) The travelers spoke to each other.

E-jaw-or-a yayi gu-lol-lob-or-e  
c3-walk-iter-agent c17.def SM.3rd.PL-red-speak-rcm-PFV

c) The priests heard stories about each other.

E-labe yayi gu-lob-or-e wa baj-il  
c3-priest c17.def SM.3rd.PL-speak-rcm-PFV comp happen-3<sup>rd</sup>.pl.obj  
(the priests told to each other what happened to them)

d They left presents in front of each other.

(Bugo) ga-bang-or-e si-kado ni ga-yyong-il  
PRN.3<sup>rd</sup>.pl SM.3rd.PL-put-rcm-PFV c4-present prep c9-front-3<sup>rd</sup>.pl.poss

COMMENT: This sentence is ambiguous in the sense that, although it clearly has a reciprocal reading, it can as well convey the idea that two actions were performed around the same time. Suppose Bob put a present in front of him and Alice also put a present in front of her and they both performed the actions (of putting the presents in front of them) roughly at the same time. Their actions will be rendered exactly as in (A12d).

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) We saw each other.

(Wóli) ju-jug-or-e  
PRN.1<sup>st</sup>.pl SM.1st.PL-see-rcm-PFV

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

(Buru) ji-fuo ji-ramben-or  
PRN.2<sup>nd</sup>.pl SM.2<sup>nd</sup>.PL-must SM.2nd.pl-help-rcm

c) We will wash ourselves.

(Wóli) pan ju-pos-o  
PRN.1<sup>st</sup>.pl fut SM.1st.PL-wash-RFM

d) They always criticize each other.

Bugo nanosan ni gu-gising-or  
PRN.3<sup>rd</sup>.pl always conj SM.3rd.PL-criticize-rcm

e) Many boys kicked each other.

Ú-pur g-a-mmeng-e gu-pa-or-e  
c8-boy SM.3rd.PL.rel-many-PFV SM.3rd.PL-kick-rcm-PFV

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.

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 –

A15a) Paul lost his shoes.

Pool na-llim-en-e si-ddalla-ol  
Paul SM.3rd.SG-lose-caus-PFV c4-shoes-3<sup>rd</sup>.sg.poss

b) Paul raised his hand. (e.g., in class)

Pool na-teb-e ga-ñen-ol  
Paul SM.3rd.SG-raise-PFV c9-hand-3<sup>rd</sup>.sg.poss

c) Paul cut his hand. (e.g., accidentally)

Pool na-ib-o-e ni ga-ñen  
Paul SM.3rd.SG-cut-RFM-PFV prep c9-hand

COMMENT: Please note that here, the use of the reflexive *-o* conveys the idea that the action was unintentional. If the action was intentional, the RFM strategy would have been used. Please note that just the verb *eib* ‘cut’ would also suffice to convey that idea.

d) Paul examined his hand.

Pool ná-lingen-e ga-ñen-ol  
Paul SM.3rd.SG-examine-PFV c9-hand-3<sup>rd</sup>.sg.poss

e) Paul twisted his ankle (or ‘stubbed his toe’)

Pool na-ja-oro-e ji-ib-a ni fi-ssix ga-at  
Paul SM.3rd.SG-stub-RFM-PFV c10-cut-agent prep c6-finger c9-foot

#### 2.4.2 Reflexives and reciprocals in nominals –

A16) Andrew's self-confidence annoyed Mary.

Ga-ffim-oro Andere gu-tinn-en-e Mari ni fi-iñ.  
c9-trust-RFM Andrew prn.c8.3rd.sg-hurt-caus-PFV Mary prep f6-liver

A17a) Andrew's introduction of himself worried<sup>4</sup> the teacher.

Andere a-ggiten-oro-ol ga-jaw-ol kan-e a-muse ahu ga-pinor  
Andrew SM.3rd.SG-tell-RFM-3rd.sg.poss c9-name make-PFV c1-teacher c1.def c9-  
worry

b) Andrew's selection<sup>5</sup> of himself was too critical.

E-çob-oro Andere é-ttani-ttani fang  
c3-select-RFM Andrew prn.c3.3rd.sg-red-difficult adv

c) Their instructions to each other were not clear.

E-ggiten-or-il e-nganno-ut  
c3-instruct-RFM-3<sup>rd</sup>.pl.poss prn.c3.3rd.sg-clear-neg

d) Their selection of each other were too generous.

E-çob-or-il e-ful-ut  
c3-select-RFM-3<sup>rd</sup>.pl.poss prn.c3.3<sup>rd</sup>.sg-hard-neg

<sup>4</sup> The verb ‘impress’ is replaced by ‘worry’

<sup>5</sup> The word ‘evaluation’ is replaced by ‘selection’

2.4.4 It would be useful to us if you could provide a list of the different strategies so we are both clear as to which ones you distinguish.

**RFM strategy** – This is the verb suffix *-oro* which is the most productive and regular way to form reflexive readings for sentences. It works with all transitive verbs. It can be interpreted as a benefactive argument when the verb is intransitive. It can also be used to express emphasis.

**IRF strategy** – This is the verb suffix *-o* which is lexically restricted to certain verbs that sometimes have idiosyncratic, not necessarily reflexive readings. Grooming verbs, for example.

**RCM strategy** – This is the verb suffix *-or*, which can productively be used to form reciprocal readings (and benefactive reciprocal readings), but this suffix has many other meanings, including ‘together’, ‘at the same time’, ‘continually’, all of which are fairly productive. This affix also has some idiosyncratic meanings for particular verbs.

**Independent pronoun strategy** – Independent pronouns, that is, pronouns that do not require an antecedent in the sentence, can be anaphoric to other nominals in the sentence as long as they are not too local. At first approximation, wherever RFM, RCM or IRF is possible, a potentially independent pronoun cannot have an anaphoric reading.

It is possible for combinations of these strategies to occur on the same verb, particularly the RFM and RCM, but for the most part, multiple occurrences of these affixes combine to permit the sum of the range of meanings that they provide independently, though there are some ordering restrictions on interpretation.

See the database for updated analysis of some of these strategies

### Part 3 General details about the strategies

#### 3.1 Marking

##### 3.1.1

Eegimaa marks reflexivity on the verb. The reflexives markers are all suffixes attached to the verb in exactly the same position where the bound suffix pronoun occur.

Andere<sup>1</sup> na-çob-[oro]<sup>1</sup>-e jas  
Andrew SM.3rd.SG-select-RFM-PFV ADV  
‘Andrew quickly selected himself’

Andere<sup>1</sup> na-çob-[ol]<sup>2</sup> jas  
Andrew SM.3rd.SG-select-3<sup>RD</sup>.SG.OBJ ADV  
‘Andrew quickly selected him’

Bala<sup>1</sup> na-raw-[or]<sup>1</sup>-e a-ssaxo  
Bala SM.3rd.SG-stretch-RFM-PFV SM.3rd.SG-careful

Bala<sup>1</sup> na-raw-[ol]<sup>2</sup> a-ssaxo  
Bala SM.3rd.SG-stretch-3<sup>RD</sup>.SG.OBJ SM.3rd.SG-careful

## 3.2 Productivity

3.2.1 How productive is this strategy, with respect to which verbs or predicates allow it? when you write up this section, indicate that the strategy in question is either *extremely productive*, *fairly productive*, or *I am not sure*.

COMMENT: RFM is extremely productive in the expression of reflexivity and when it comes to expressing reciprocity, or-self is exclusively the strategy used and is also extremely productive. *o-self* which also expresses reflexivity has a limited productivity.

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

COMMENT: Most of the verbs where IRF is found are verbs of grooming. The RFM is less restricted and can even be used with verbs of grooming either to provide emphasis or to show that the action was intentional.

## 3.3 Context of Use

3.3.1 How marked or natural is this strategy?

COMMENT: The strategies discussed above are unmarked.

3.3.2 Is special intonation or emphasis necessary, and if so, where?

COMMENT: There are some intonational effects that affect which of a set of possible interpretations are favored or acceptable.

3.3.3 Is a particular discourse context (e.g., contradicting) necessary? For example, it is possible to get coconstrual of subject and object in English with an object pronoun in special circumstances, as in B1.

- B1a) If Marsha admires just one person, then I suspect that she admires just HER.
- b) Marsha thinks I should trust no one but herSELF.

COMMENT: In Eegimaa, the pronoun *açila* (him/her) would be used in this case. The strategies described are all suffixes attached only to verbs. There is, however, an emphatic reading for verbs marked with RFM when the RFM does not correspond directly to an argument of the verb or a benefactive. The emphatic reading can be contrastive – e.g. X did it in contrast to others who might have, or it can emphasize that the act was self-motivated or done without assistance (how it was done).

## 3.4 Morphology

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

COMMENT: No.

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?

COMMENT: The RCM has many possible meanings, but the RCM has no meaning on its own. The RFM has only reflexive and emphatic reflexive readings, but it has no meaning on its own. The IRF has no meaning on its own.

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.

COMMENT: Not applicable.

(a) Agreement features etc.

COMMENT: The reflexive forms in Eegimaa are invariable. The same forms are always used consistently, regardless of person, number, gender, and case of the referent.

(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.

COMMENT: See the comment in §3.4.2

### 3.5 The agreement paradigm

3.5.1 Give the morphological paradigm of each reflexive and reciprocal strategy.

COMMENT: The two reflexive forms in Eegimaa, *-o* and *-oro*, are invariable and so is the RCM *-or*.

### 3.6 Interaction with verb morphology - Incompatibilities

3.6.1 Tense, Mood, Aspect.

It is sometimes observed that coconstrual strategies are sensitive to the tense, mood or aspect of a clause, particularly if the aspect (whether an event is complete or not) has other syntactic effects. Check with at least the verbs meaning *see*, *praise*, *help*, *like*, *know*, and *wash*.

B3a) Gina (generally) washes herself

Gina na-pos-o-e

Gina SM.3<sup>RD</sup>.SG-wash-IRF-PFV

KS: How is this perfective?

b) Gina na-poso-pos-o

Gina SM.3<sup>rd</sup>.SG-RED-wash-IRF

‘Gina was indeed washing herself’

c) Gina should wash herself.

Gina na-war-o a-pos-o

Gina SM.3<sup>rd</sup>.SG-MOOD-IRF SM.3<sup>rd</sup>.SG-wash-IRF

COMMENT: In Eegimaa, the perfective aspect can be expressed in three ways. One way by which it is expressed is via the bare infinitive to which the appropriate subject marker is prefixed. It should be noted that in Eegimaa subject markers have various forms and the use of each form is dependent on whether the event described by the verb has actually taken place (at least from the speaker's perspective), is happening at the time of speaking or whether the speaker views the event as something which has not occurred.

**KS: This needs more discussion.**

Another ways of conveying the perfective aspect in Eegimaa is via the suffix *-e* which for ease of reference I will term it *e-perfect*. The third way of expressing the perfective aspect is through reduplication, as it the case in B3b. Here to, for convenience purpose, I will refer to this way of rendering the perfective aspect as *RED-perfect*, with *RED* standing for reduplicant. There is a nuance and also a difference in usage between the perfective aspects expressed by the three aforementioned strategies. The bare infinitive is used only in storytelling and Bassene (2007) refers to it as the narrative aspect. It serves to recount the story in a way to make the listen experience it as if it is happening at the time of speaking. **(KS: I believe we identified this as the historical present)** The difference *-e*-perfect and red-perfect is that with red-perfect, there is a strong emphasis on the completeness of the event **(it did, indeed, happen – an affirmation)** whereas *e*-perfect presents the event as just complete and does not have an emphatic reading.

3.6.2 Grammatical Function (GF)-changing - Check whether there are any GF-changes that are not compatible with the current strategy. Manipulate the verbs meaning *talk to*, *give*, *visit*, and *kill*.

COMMENT:: In Eegimaa, the morpheme *-en* is a causative marker. The derivation of causatives via *-en* is a very productive process. Consider the examples below:

- a. Ni-tey-e  
SM.1st.SG-run-PFV  
'I ran'
  
- b. Ni-tey-en-e  
SM.1st.SG-run-CAUS-PFV  
'I drove/ride' (lit: I caused to run)

In (b) the object or the cause is omitted. Such an omission only possible in situation it is clear from the context what it is that I caused to run. The causative marker does increase the valence of the verb. Contrary to use of *-en*, the use of *-i*, the passive marker has the contrary effect, meaning that it decrease the valence of the verb. This is shown in the examples below.

- a. Pan gu-jog-i  
FUT SM.3rd.PL-catch-2<sup>nd</sup>.SG..OBJ  
'They will catch you'
  
- b. Pan gu-jog-i'  
FUT SM.3rd.PL-catch-PASS  
'They will be caught'

Contrary to languages such as English, which allow the use of an oblique phrase such ‘by the agent’ in a passive construction to provide information about the agent of the action denoted by the verb, Eegimaa does not allow such a construction. The whole purpose in the use of passive construction in Eegimaa is exactly not to reveal the agent of the action. If the speaker wishes to provide information regarding the agent, then they have to use active voice.

3.6.3 (formerly 3.6.1) If you are aware of operations or morphemes that cannot co-occur with this strategy, then list them here.

### 3.7 Uses that are not quite coreference

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

COMMENT: See the discussion of IRF restrictions.

3.7.2 Emphatic or intensifier. As in the English, The president himself answered the phone.

Your language may also have forms that require a local antecedent but seem to indicate a relationship with an antecedent that stresses how a particular participant related to an event. We see this with constructions in English like (B1c,d)

B1c) John ate fish himself.

\*Jon a-tiñ-e                    ju-ol    fanga-ol  
Ton SM.3<sup>rd</sup>.SG -eat-PFV CL-fish EMPH-POSS

d) John himself ate fish.

Jon fanga-ol    a-tiñ-e                    ju-ol  
Jon EMPH-POSS SM.3<sup>rd</sup>.SG-eat-PFV CL-fish

The intensifier *fanga-ol* always has to follow the noun it’s referring to.

Please translate (B1c,d). Which of the readings below are permitted? (English adverbial reflexives permit readings (C) and (D), but other languages permit (A) and (D) with forms that seem more like English *himself* than English *alone*.)

A) John alone did this - i.e., only John and no other individuals did this.

Jon bare a-kan-e                    daure  
Jon alone SM.3<sup>rd</sup>.SG-do-PFV DEM.PROX

B) John did this alone - John was unaccompanied when he did this.

Jon nevonol a-kan-e                    daure  
Jon alone-POSS SM.3<sup>rd</sup>.SG-do-PFV DEM.PROX

C) John himself did this - John appearing in person did this (no one did it for him)

Jon fanga-ol a-kan-e                    daure  
Jon EMPH-POSS SM.3<sup>rd</sup>.SG-do-PFV DEM.PROX

D) John himself did this - Even John did this (e.g. Although you would not have thought he



would, John also ate the crispy jellyfish)

Jon fanga-ol a-kan-e daure  
Jon EMPH-POSS SM.3rd.SG-do-PFV DEM.PROX

The word *bare* means only and sometimes it is reduplicated as *barebare* emphasize. The construction *nevon-POSS* is used to express the idea that X alone, without being accompanied by anybody else performed some action. However, there are certain contexts where the use of *bare* and *nevon-POSS* results in the same interpretation, as shown in the examples below.

- a. Abu bare a-teg-e = Abu nevon-ol a-teg-e  
Abu only SM.3rd.SG-contribute-PFV Abu alone-POSS SM.3rd.SG-contribute-PFV  
'Only Abu made a contribution.'
- b. Abu bare a-jow-ul<sup>6</sup>-o = Abu nevon-ol a-jow-ul-o  
Abu only SM.3rd.SG-walk-DER-IRF Abu alone-POSS SM.3rd.SG-walk-DER-IRF  
'Only Abu came' or 'Abu came alone'

### 3.7.3 Middle.

COMMENT: See my comments in §3.6.2 for information relative to middles in Eegimaa.

3.7.4 Distributive, sociative, etc. Some strategies (reciprocal markers most frequently) can also be used to mean that some action was performed separately, or jointly, or repeatedly, etc. You should only report uses that do not involve coconstrual between two logical arguments.

COMMENT: The morpheme *-or*, as mentioned earlier, also serves to derive words which describe an even or an action performed repeatedly. Such a repetitive reading is even more salient when used in combination with reduplication to derive new words. **In addition, *-or* can mean 'continually' or 'at the same time' (simultaneously), or 'together'.**

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).

COMMENT: The scenario described above is possible in Eegimaa only with the object pronouns but not with the reflexive pronouns. In the examples below, the suffix *-ol* refers to a third person other than Bil and Mari. Please note that the very presence of the third person does not necessarily put him/her in a prominent cognitive status and the use of the object pronoun *-ol* in the following examples is only possible if and only if the third person being referred to is at least in a familiar cognitive status. For more on the cognitive status of Eegimaa referring expressions, please see Gundel, Bassene, Gordon, Humnick and Khalfaoui (2010). The reflexive pronoun *-oro* always refers to the subject of the verb to which it is attached (Bil or Mari).

B5a) Bill did not see X  
Bil<sup>1</sup> a-jux-ut-ol<sup>3</sup> /a-jug-oro<sup>1</sup>-ut

---

<sup>6</sup> *-ul* is a derivational affix which serve to derive verbs which denote some action toward the speaker. In the example above, *a-jow-ul-o* literally means 'walk himself/herself toward the speaker'

Bil SM.3rd.SG-see-neg-3<sup>rd</sup>.sg.obj SM.3rd.SG-see-refl-neg

b) Does Mary like X?

Min Mari<sup>1</sup> na-mang-ol<sup>3</sup> /na-mang-oro<sup>1</sup>-e?  
Inter Mari SM.3rd.SG-like-3<sup>rd</sup>.sg.obj SM.3rd.SG-like-refl-PFV

c) X went to the bank yesterday.

Figen ø na-kay-e ni bank yayi  
yesterday ø SM.3rd.SG-go-PFV prep bank c17.def

Can this form be used to refer to one of the participants in the conversation who is not otherwise mentioned in that sentence?

B6a) Bill insulted X. (X = speaker, X = addressee)

Bil na-jel-om/najeli  
Bil SM.3rd.SG-insult-1<sup>st</sup>.sg.obj / SM.3rd.SG-insult-OM.2<sup>nd</sup>.sg

b) Many people do not like catfish<sup>7</sup>, but X likes them.

(X = speaker, X = addressee)

Bug-an g-a-mmeng-e gu-mang-ut gu-sabet  
c2-person SM.3rd.PL-rel-many-PFV SM.3rd.PL-like-neg c7-catfish

bare inje ni-mang g-o bare au nu-mang g-o  
but PRN.1<sup>st</sup>.sg SM.1st.SG-like c7-PRN.3<sup>rd</sup>.pl but PRN.2<sup>nd</sup>.sg SM.2nd.SG-like c7-  
PRN.3<sup>rd</sup>.pl

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.

The English generic form one is rendered in Eegimaa by *an* 'person' or *bugan* 'people' depending on the context.

B7a) I don't like the way he speaks to one.

I-mang-ut min nax' a-lob me ni bug-an  
SM.1st.SG-like-neg comp hab SM.3rd.SG-speak mood conj c2-person

b) One cannot be too careful

An u-ju-ut ú-ssali ikki gát  
c1.person SM.2nd.SG-able-neg SM.2nd.SG-careful comp adv

c) Bill insults one before one can say a word.

Bil pan a-jel an o mb-a-lober-ut wanosan.  
Bill fut SM.3rd.SG-insult c1.person prn.3<sup>rd</sup>.sg comp-SM.3rd.SG-speak-neg anything

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<sup>7</sup> The original word, anchovies, was replaced by catfish since I don't know the Eegimaa word for

### 3.7.6 Focus.

Please translate these question-answer pairs. (Numbers are out of sequence here for a reason)

B15) Who did the farmers see?

Ai u-wañ-a                      wawu    gu-jug-e?  
who c8-cultivate-AGENT c18.def SM.3rd.PL-see-PFV

They saw *him*.

Açila            gu-jug-e  
PRN.3<sup>rd</sup>.sg SM.3rd.PL-see-PFV

COMMENT: This sentence literally means ‘it is him that they saw’.

Gu-jug-ol  
SM.3rd.PL-see-OM.3<sup>rd</sup>.sg  
‘They saw him’

COMMENT: This one means ‘they saw him’ without any emphasis whatsoever.

(For example, the children are playing hide and seek in the yard, four girls and one boy, John. The farmers entered the yard but they only saw John).

B16) The farmers didn’t see Mary. They saw *him*.

U-wañ-a                      wawu    gu-jug-ut                      Mari. Açila    gu-jug-e  
c8-cultivate-AGENT c18.def SM.3rd.PL-see-neg Mary pm.3<sup>rd</sup>.sg SM.3rd.PL-see-PFV

COMMENT: In the examples above, the pronoun *açila* can be replaced by *-o* with the same meaning and emphasis. Gundel, Bassene, Gordon, Humnick and Khalfaoui (2010) argue that in Eegimaa, the pronoun *açila* requires in focus cognitive status. The same argument holds for the pronoun *o* which is also a third person singular pronoun.

3.7.7 Other. Are there other ways to use the strategy that do not express coreference (or reciprocal coreference) between two arguments? If so, give examples and a brief explanation here.

COMMENT: See the discussion in 3.7.4

### 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 (e.g., Grisham) and their work. Feel free to substitute your favorite national author for Grisham.

B8a) Castro admired himself in the wax<sup>8</sup> museum. (himself = statue of Castro)

(a1) Cásitiro na-mang-e                      estatí-ol                      ya-am-e    ni    muse    y-ai  
Castro SM.3rd.SG-like-PFV statue-3<sup>rd</sup>.SG.POSS REL-be-PFV PREP museum CL-DEF

---

<sup>8</sup> The word wax was not rendered in the translation above.

(a2) \*Cásitiro na-mang-oro-e ni muse y-ai  
 Castro SM.3rd.SG-like-RFM-PFV PREP museum CL-DEF

b) Boris<sup>9</sup> has not read himself in Swahili, though he has read himself in Spanish. (himself = Boris's writings)

(b1) Boris a-janga-ut sí-llibur-ol ni Suwahili,  
 Boris SM.3rd.SG-read-NEG CL-book-3<sup>rd</sup>.SG.POSS PREP Swahili

bare na-janga y-o ni español.  
 but SM.3rd.SG-read CON-3<sup>rd</sup>.SG.OBJ PREP Spanish

(b2) ?Boris a-janga-oro-ut ni Suwahili, bare na-janga-oro-e ni español  
 Boris SM.3rd.SG-read-RFM-NEG PREP Swahili but SM.3rd.SG-read-RFM-PFV PREP Spanish

The differences emerge in English for cases like those in (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) Castro washed himself carefully, so as not to damage the wax.

Cásitiro na-pos-oro-e a-nogn,  
 Castro SM.3rd.SG-wash-RFM-PFV SM.3rd.SG-careful

jambi a-gal-en síras y-ai  
 CONJ.NEG SM.3rd.SG-damage-CAUS wax CON-DEF  
 "Castro washed himself by himself..."

b) Castro washed carefully, so as not to damage the wax.

?Cásitiro na-pos-o-e a-nong,  
 Castro SM.3rd.SG-wash-IRF-PFV SM.3rd.SG-careful

COMMENT: Conveys the meaning that Castro washed himself (not his statue).

jambi a-gal-en síras y-ai  
 CONJ.NEG SM.3rd.SG-damage-CAUS wax CON-DEF

c) The movie star dressed herself carefully, so as not to damage the wax.

Aktar axu na-ssim-oro-e a-nong,  
 actor DEF SM.3rd.SG-dress-RFM-PFV SM.3rd.SG-careful

jambi a-gal-en síras y-ai  
 CONJ.NEG SM.3rd.SG-damage-CAUS wax CON-DEF  
 'The actress dressed herself by herself...'

d) The movie star dressed carefully, so as not to damage the wax.

?Aktar axu na-ssim-o-e a-nong,  
 actor SM.3rd.SG-dress-IRF-PFV SM.3rd.SG-careful

<sup>9</sup> The name Grisham is replaced by Boris.

jambi a-gal-en siras y-ai  
CONJ.NEG SM.3rd.SG-damage-CAUS wax CON-DEF

COMMENT: Conveys the meaning that the actress dressed herself (not her statue).

e) Castro saw himself in the TV<sup>10</sup>, but he didn't like what he saw.

Casitiro na-jug-oro-e ni tele,  
Castro SM.3rd.SG-see-RCM-PFV PREP TV

bare a-mang-ut wo na-ju-me  
CONJ.NEG SM.3rd.SG-like-NEG what SM.3rd.SG-see-MOOD

COMMENT: However, in a figurative sense and where the context is very clear that we are referring to statues of both Castro and the actress, (B9b, d) are acceptable but definitely not (B9a, c), unless we meant that the statues themselves are performing the actions on themselves. (B9e) is fine.

KS: This is one we should discuss for (B9b,d)– The question is whether the dressing of the statue is understood as a reflexive act or it was just dressing or washing stuff in general, in this case, a statue.

B10a) Boris says he sounds better in Swahili. (where he = Grisham's writings)

Boris na-ag-e na-xoy-e ni Suwahili  
Boris SM.3rd.SG-say-PFV SM.3rd.SG-better-PFV PREP Swahili

b) Castro thought that he looked handsome. (he = statue of Castro)

Cásitiro na-jog-e buox na-waró  
Castro SM.3rd.SG-hold-PFV CONJ SM.3rd.SG-handsome

Proxy readings are also possible for reciprocals in many languages. For (B11a), once again the antecedents are the authors and each other describes the works these authors have written, such that Mark Twain did not read Victor Hugo's novels in Swahili and Victor Hugo did not read Mark Twain's novels in Berber. For (B11b), imagine a show where there are actors masquerading as our two protagonists. The first each other refers to the person Marlene and Castro, but the second each other refers to the actors (or statues) representing them on the stage or in the show.

B11a) Boris Diop<sup>11</sup> and Birago Diop did not read each other in Berber.

Boris Diop ni Birago Diop gu-janga-or-ut ni Berber  
Boris Diop and Birago Diop SM.3rd.PL-read-RCM-NEG PREP Berber

b) Mariama<sup>12</sup> and Castro did not see each other in the audience, but they did see each other on the stage/in the show.

Marilene ni Casitiro gu-jug-or-ut ni ja-mmeng jaju,

<sup>10</sup> 'Show' was replaced by 'TV'

<sup>11</sup> Mark Twain replaced by Boris Diop

<sup>12</sup> Marlene replaced by Mariama

Mariama and Castro SM.3rd.PL-see-RCM-NEG PREP CL-crowd CL.DEF

bare gu-jug-oro-e n' estrad y-ai  
but SM.3rd.PL-see-RCM-PFV PREP stage CL-DEF

### 3.9 Ellipsis

Consider the following examples, which all have an ellipsis of one sort or another. In (B12), there is missing structure that is parallel or identical to stated structure and it is interpreted as if it is there.

B12a) Sherman likes/praises himself more than Bill  
Sheriman na-sadd-oro-e fang Bil  
Sherman SM.3rd.SG-praise-RFM-PFV more Bill

b) Sherman likes/praises himself more than Bill does  
Sheriman na-sadd-oro-e fang Bil  
Sherman SM.3rd.SG-praise-RFM-PFV more Bill

COMMENT: Both sentences are expressed the same way, with ellipsis or without ellipsis as shown in the example below.

c) Sheriman na-sadd-oro-e fang (min) Bil (a-sadd-oro me)  
Sherman SM.3rd.SG-praise-RFM-PFV more CONJ Bill SM.3rd.SG-praise-RFM  
MOOD

COMMENT: The sentence with ellipsis is preferable to the one without ellipsis. Note that the type of ellipsis observed above is only possible in a situation where X's action on himself/herself is compared to the same action by Y on Y's self.

## PART 4 Exploration of syntactic domains

### 4.1 Clausemate coconstrual

#### 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) Bob saw X.  
Bob na-jug-oro-e  
Bob SM.3rd.SG-SEE-RFM-PFV

b) The women described X.  
W-aare wawu gu-ggetten-oro-e  
CL-woman CL.DEF SM.3rd.SG-tell-RFM-PFV

c) You(pl.) kicked X.

(Buru)      ji-pa-or-e  
PRN.2<sup>nd</sup>.PL SM.2<sup>nd</sup>.PL-kick-RFM-PFV

d) They praised X

(Bugo)      gu-sadd-oro-e  
PRN.3<sup>rd</sup>.PL SM.3<sup>rd</sup>.PL-praise-RFM-PFV

e) Ba-jur babu      na-jug-oro-e  
CL-fill CL.def SM.3<sup>rd</sup>.SG-see-RFM-PFV  
'The girl saw herself'

f) A-vvugul ahu      na-lluj-or-e  
CL-bride CL.DEF SM.3<sup>rd</sup>.SG-look-RFM-PFV  
'The bride looked at herself (in the mirror)'

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) Donna washed X. (X = Donna)

Donna na-pos-o-e  
Donna SM.3<sup>rd</sup>.SG-wash-IRF-PFV

b) Don cut X's hair. (X = Don).

Don na-ccig-o-e  
Don SM.3<sup>rd</sup>.SG-shave-IRF-PFV

c) The girl cut X [unintentionally] (X = the girl)

Ba-jur babu      na-ib-o-e  
CL-girl CL.DEF SM.3<sup>rd</sup>.SG-cut-IRF-PFV

d) A-vvugul ahu na-ssim-o-e      wári  
CL-bride CL.DEF SM.3<sup>rd</sup>.SG-dress-IRF-PFV good  
'The bride dressed nicely'.

e) A-vvugul ahu na-jal-o-e  
CL-bride CL.DEF SM.3<sup>rd</sup>.SG-undress-IRF-PFV  
'The bride undressed'

f) Su-jur sasu      gu-eç-o-ut  
CL-girl CL.DEF SM.3<sup>rd</sup>.SG-braid-IRF-PFV  
'The girls didn't braid (their hair)'.

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) John hates/fears X

Jon na-lal-oro-e  
Jon SM.3rd.SG-hate-RFM-PFV

b) John is ashamed of X

Jon na-kkan-oro-e                      ñu-ssu  
Jon SM.3rd.SG-make-RFM-PFV CL-shame  
(lit: 'Jon put shame on himself')

c) John is worried about X

Jon na-kkan-oro-e                      ga-pinor  
Jon SM.3rd.SG-make-RFM-PFV CL-worry  
(lit: 'Jon put worry on himself')

d) John is proud of X

Jon ná-kkanum-oro-e  
Jon SM.3rd.SG-respect-RFM-PFV

e) John worries/troubles/pleases X

Jon na-ssumen-oro-e  
Jon SM.3rd.SG-please-RFM-PFV

All the sentences above are perfectly acceptable in Eegimaa.

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

C5a) The women will destroy X

W-aare<sup>1</sup>      wawu      pan gu-galen-oro<sup>1</sup>  
CL-woman CL.DEF fut SM.3rd.PL-destroy-RFM

b) The machines built X (X = themselves)

Sí-masin<sup>1</sup>      sasú      si-ccokkor-oro<sup>1</sup>-e  
CL-machines CL.DEF CL-build-RFM-PFV

c) A-ppal-ol<sup>1</sup>                      na-mug-o<sup>1</sup>-e  
CL-friend-3<sup>rd</sup>.SG.POSS SM.3rd.SG-build-RFM-PFV  
'His/her friend killed himself/herself'

d) Bob<sup>1</sup> o                      nah' a-xikk-oro<sup>1</sup>  
Bob PRN.3<sup>rd</sup>.SG hab SM.3rd.SG-sew-RFM  
'Bob usually sew his clothes.'

e) ga-rafa      gagu      gu-fum-o-e  
CL-friend CL.DEF CL.SG.SM-break-IRF-PFV  
'The bottle broke.' **Gloss vs. Translation?**



b) E-ngoç-om            e-çaç-o-e  
CL-hat-1<sup>st</sup>.SG.POSS SM.CL.SG-break-IRF-PFV  
'My hat broke.'

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) The boys represented X.  
U-pur    wawu    gu-xow-il.  
CL-boy CL.DEF CL-head-3<sup>rd</sup>.PL.POSS  
(lit: the boys their heads)

COMMENT: Note that in Eegimaa, when you represent someone or a group of people at an event or you are acting in the name of someone or a group of people, you are the 'person of' whoever you are representing or you are acting 'in the name of' the person/people you are representing. However, if you are acting on your own behalf, 'it's your head', 'your action', or 'you are acting on your name'.

b) John spoke for X.  
Jon (daru) e-lob-ol  
Jon DEM CL-speak-3<sup>rd</sup>.SG.POSS

c) Jon (daru) e-lob        e-sug-il  
Jon DEM CL-speak CL-people-3<sup>rd</sup>.PL.POSS

Or

d) Jon na-lollob            ni ga-jow    e-sug-il  
Jon SM.3<sup>rd</sup>.SG-RED-speak PREP CL-name CL-people-3<sup>rd</sup>.PL.POSS

At this point you might want to reconsider your answer to section 3.7.1, where we asked you about idiosyncratic or inherent reflexives - perhaps some of the ones you looked at earlier belong to some pattern that you might alert us to here.

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At this point, we should have some idea of the verb classes for which local coreference strategies succeed, and so from this point on, in formulating sentences testing the usage of a given strategy, use only predicates that would not be excluded for that strategy based on the verb class restrictions you have already given us. For example, if the current strategy cannot be used with the verb "see", then there is no need to show that, for example, reverse binding with "see" (e.g. \*Himself saw Joe, see 4.1.3.6 below) is ungrammatical; instead, start with a predicate that is compatible with the that strategy.

## 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.

The notion of indirect object as expressed in languages such as English, French and Spanish may not hold in Eegimaa and many of the verbs which have a direct object in these languages are expressed in Eegimaa with a direct object.

C7a) Mary gave the gift to X (X = Mary)

Mari na-sen-oro-e                      é-kkado y-ai  
 Mari SM.3rd.SG-give-RFM-PFV CL-gift CL.DEF

b) John showed the house to X (X = John)

Jon na-ggan-oro-e                      y-ang              yai  
 Jon SM.3rd.SG-show-RFM-PFV CL-house CL.DEF

For comparison, also provide judgments for the following:

C8a) Mary gave X the gift (X = Mary)

Mari na-sen-oro-e                      é-kkado y-ai  
 Mari SM.3rd.SG-give-RFM-PFV CL-gift CL.DEF

b) John showed X to the children (X = John)

Jon na-ggan-oro-e                      y-ang              y-ai  
 Jon SM.3rd.SG-show-RFM-PFV CL-house CL.DEF

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 (e.g., in English, Alice in Dan gave Alice a book is the indirect object of a transitive verb) and prepositional objects, but be sure to consider these sorts of argument types whether your language has casemarking or not.

C9a) Dan talked to X.

Dan na-lol-lob-en-e  
 Dan SM.3rd.SG-RED-tell-CAUS-PFV

b) Dan told Mary about X (X = Dan)

Dan na-lob-e                      fu-xow-ol                      Mari  
 Dan SM.3rd.SG-tell-PFV CL-head-3<sup>rd</sup>.SG.POSS Mari

c) Dan gave X a book.

Dan na-sen-oro-e                      e-llibur  
 Dan SM.3rd.SG-give-RFM-PFV CL-book

Eegimaa allows oblique clauses with or without overt preposition. With both reflexives and reciprocals, the use of the prepositions is very restricted. In (9a-b) the use of a preposition before

the indirect object would certainly yield ungrammaticality.

R9d) \*Dan<sup>1</sup> na-lob-e            ni    açila<sup>1</sup>  
Dan SM.3rd.SG-tell-PFV PREP 3<sup>rd</sup>.SG.OBJ

R9e) \*Dan na-lob-e            fu-xow-ol            ni    Mari  
Dan SM.3rd.SG-tell-PFV CL-head-3<sup>rd</sup>.SG.POSS PREP Mari

Sentence (R9e) actually convey the idea that Dan and Mary had a discussion about Dan instead of Dan telling Mary about himself.

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 saw a fly on X back<sup>13</sup> (X = Mary)  
Mari na-jug-e            e-wu ni    bu-sol-ol  
Mary SM.3rd.SG-see-PFV C3-fly PREP C5-back-3<sup>rd</sup>.SG.POSS

b) Mary called me because of an book<sup>14</sup> about X (X = Mary)  
Mari na-wog-om            maa    é-llibur y-oo    gu-binda-e            ni    o  
Mary SM.3rd.SG-call-1<sup>st</sup>.SG.OBJ C15-POSS C3-book C17-REL SM.3rd.PL-write-PFV PREP PRN.3<sup>rd</sup>.SG

c) John insulted<sup>15</sup> Mary because of X (X = John)  
Jon na-jel-e            Mari mata    açila  
John SM.3rd.SG-insult-PFV Mary because PRN.3<sup>rd</sup>.SG

Sentence (C10c) is ambiguous since *açila* can refer to either John or Mary. To disambiguate it, John is has to be added after *açila*.

d) We fought for ourselves<sup>16</sup>  
(Woli)    ji-taj-e            m-ololi  
PRN.1<sup>st</sup>.PL SM.1st.PL-fight-PFV C15.GEN

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.

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<sup>13</sup> The original sentence was: 'Mary saw a snake behind X'

<sup>14</sup> 'article' replace by 'book'

<sup>15</sup> 'offend' replaced by 'insult'

<sup>16</sup> The original sentence was "We laughed in spite of X"

C11a) Mary showed Hal to X.

Mari na-kkan-e Hal na-lluj-or  
Mari SM.3rd.SG-make-PFV Hal SM.3rd.SG-see-RFM

b) Mary showed X to Hal.

Mari na-ggan-oro-e Hal  
Mari SM.3rd.SG-show-RFM-PFV Hal

c) Bill gave Hal X.

Bil na-sen-e Hal Hal  
Bil SM.3rd.SG-give-PFV Hal Hal

d) Bill gave X Hal.

Bil na-sen-oro-e Hal  
Bil SM.3rd.SG-give-RFM-PFV Hal

e) Mary told/asked the boys about themselves/each other.

Mari na-lob-e u-pur wawu m-olil  
Mari SM.3rd.SG-tell-PFV C8-boy C18.DEF C15-GEN

f) Mary showed/introduced/presented the boys to each other.

Mari na-kkan-e u-pur wawu n' gu-ffas-or  
Mari SM.3rd.SG-make-PFV C8-boy C18.DEF CON PRN.C7.3<sup>rd</sup>.PL-know-RCM

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 and neither of which is a direct object (if your language has such constructions - if not just say so and move on). Consider X=Hal in (C12). If I were answering for English, I would say that (C12c) is successful with the pronoun-SELF strategy, (C12b,d) fail with both pronoun-SELF and the independent pronoun strategies, and C12a is marginal with the independent pronoun strategy.

C12a) Bill talked about Hal to X.

Bil na-lob-e ni Hal m-aa Hal  
Bil SM.3rd.SG-talk-PFV PREP Hal C15-GEN Hal

b) Mary talked about X to Hal.

Mari na-lob-e ni Hal maa Hal  
Mari SM.3rd.SG-talk-PFV PREP Hal C15-GEN Hal

c) Mary talked to Hal about X

Mari na-lob-e ni Hal m-ola  
Mari SM.3rd.SG-talk-PFV PREP Hal C15-GEN

d) Mary talked to X about Hal.

Mari na-lob-e ni Hal mola  
Mari SM.3rd.SG-talk-PFV PREP Hal C15-GEN

Sentences (C12c-d) are potentially ambiguous since *mola* can refer to either Mary or Hal.

#### 4.1.2.6 Clausemate noncoarguments

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.

C13a) Nick telephoned X's mother.

Nik na-wog-e ja-ol ni telefon  
Nick SM.3rd.SG-call-PFV mother mother-3<sup>rd</sup>.SG.POSS PREP telephone

b) Nick combed X's hair.

Nik na-peñe-e w-al-ol  
Nick SM.3rd.SG-comb-PFV C18-hair-3<sup>rd</sup>.SG.POSS

c) Nick spoke to X's boss.

Nik na-lob-e n'-a-ffan-ol  
Nick SM.3rd.SG-speak-PFV PREP-c1-boss-3<sup>rd</sup>.SG.POSS

d) Nick put X's book on the table.

Nik na-bang-e e-l-libur-ol n'-e-ttabul yai  
Nick SM.3rd.SG-put-PFV C3-book-3<sup>rd</sup>.SG.POSS PREP-C1-table C17.DEF

e) The king gave Nick a prize in X's village.

A-vvi ahu na-sen-e Nik e-beng n'è-sug-ol  
C1-king C1.DEF SM.3rd.SG-give-PFV Nick C3-prize PREP-C1-village-3<sup>rd</sup>.SG.POSS

f) The boys washed X's face.

Á-pur ahu na-pos-e bu-ul-ol  
C1-boy C1.DEF SM.3rd.SG-wash-PFV C5-face-3<sup>rd</sup>.SG.POSS

C14a) Nick's father likes<sup>17</sup> X.

Pai Nik na-ruxen-ol  
father Nick SM.3rd.SG-like-3<sup>rd</sup>.SG.OBJ

b) Nick's ambition destroyed X.

Ga-ija Nik gu-galen-ol  
C9-ambition Nick PRN.C9.3<sup>rd</sup>.SG-destroy-3<sup>rd</sup>.SG.OBJ

c) Nick's mother sold X's car.

Jaw Nik na-nnomen-e é-otor Nik.  
mother Nick SM.3rd.SG-sell-PFV C3-car Nick

---

<sup>17</sup> 'admires' replaced by 'likes'

Please provide translations and judgments for the following examples where the plural pronoun is coconstructed with the boys or the politicians.

X20a) The boys saw pictures of themselves/each other/them

U-pur wawu gu-jug-e su-foto-il  
 c8-boy C18.DEF SM.3rd.PL see-PFV C4-picture-3<sup>rd</sup>.PL.POSS

b) Mary told the boys about pictures of themselves/each other/them

Mari na-lob-e u-pur wawu maa su-foto-il  
 Mary SM.3rd.SG-tell-PFV c8-boy C18.DEF about C4-picture-3<sup>rd</sup>.PL.POSS

c) The politicians planned insults<sup>18</sup> against each other.

Ú-polotix-a wawu gu-jog-e bi-jedd-or  
 c8-politician-agent C18.DEF SM.3rd.PL-hold-PFV C5-insult-RCM

d) The politicians faked/simulated attacks against themselves/them.

Ú-polotix-a wawu gu-ffoxul-e bi-jedd-oro  
 c8-politician-agent C18.DEF SM.3rd.PL-simulate-PFV C5-insult-RFM

4.1.2.7 Demoted arguments - Refer back to the range of grammatical function-changing operations (such as passive, antipassive, applicative, possessor ascension, dative alternation) that you considered 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. It might be easier to go back to 3.6 to do what is asked there once you have done this section.

Example: (C15a-c) have been passivized. If your language has passive, construct reflexive and non-reflexive versions of each one as above. For English, the by-phrases in (C15a,b) are not interpretable as "alone" (see 3.6) and are not generally regarded as acceptable with by herself.

As noted in §3.6, Eegimaa passive construction does not allow by-phrases. If it is necessary for the agent of the action to be mentioned, then an active construction is used.

C15a) Polly was praised by X

Poli na-sal-i'-sal  
 Polly SM.3rd.SG-RED-PASS-praise

b) Polly was helped by X

Poli na-ramben-i'-ramben  
 Polly SM.3rd.SG-RED-PASS-help

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

Ja-ttiito ji-ffasi' ni Poli  
 C10-little PRN.C10.3<sup>rd</sup>.SG-PASS PREP Polly

<sup>18</sup> The word 'attacks' is replaced by 'insults' since in Eegimaa, an attack is called by what it is.

- d) The wax melted itself  
 Ga-way gagu gu-tujul-o-e  
 C9-wax C9.DEF PRN.C9.3<sup>rd</sup>.SG-melt-IRF-PFV

In (C15a-c), the reflexive reading is not apparent and the most likely interpretation is that the real subject is not the same as X. However, since the real subject (the by-phrase) is not mentioned, one can indeed make the case that since the real subject can be either X or someone else. In (C15d), the reflexive reading is clearly available.

There are more subtle cases, like (C15d), where the interpretation is not equivalent to "the wax melted", but requires an odd agency for the subject such that it acted on itself to melt itself. The latter interpretation requires some sort of animacy for the subject, but the problem for C15d in this regard is can be mitigated, insofar as it is possible to imagine a fairy story in which an animate wax character Max commits suicide, hence Max melted himself.

### 4.1.3 Properties of antecedents

#### 4.1.3.1 Pronouns, person and number –

C16a) I saw X.

Ni-jug-oro-e  
 SM.1st.SG-see-RFM-PFV

b) You saw X. (etc.)

Nu-jug-oro-e  
 SM.2nd.SG-see-RFM-PFV

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

C17a) I washed X.

Ni-pos-o-e  
 SM.1st.SG-wash-IRF-PFV

b) I hate X.

Ni-lal-oro-e  
 SM.1st.SG-hate-IRF-PFV

c) I told John about X

Ni-lob-e Jon fu-xow-om  
 SM.1st.SG-tell-PFV Jon CL-head-1<sup>st</sup>.SG.POSS

d) I saw a snake near X

Ni-jug-e e-nuxuñjang ni ga-lamb-om  
 SM.1st.SG-see-RFM-PFV CL-snake PREP CL-side-1<sup>st</sup>.SG.POSS

KS: Why is RFM in this gloss?

e) I am liked by X.

Ni-mang-i'-mang

SM.1st.SG-RED-PASS-like  
(‘I am like.’)

f) I telephoned X's mother

Ni-wog-e            ja-om            ni    telefon  
SM.1st.SG-call-PFV mother-1<sup>st</sup>.SG.POSS PREP telephone

g) My father like<sup>19</sup> X

Pay-om            na-mang-oro-e  
Father-1<sup>st</sup>.SG.POSS SM.3rd.SG-like-RFM-PFV

4.1.3.2 Animacy or humanity- Does animacy play a role in choice of strategy or is a strategy restricted to human (or metaphorically human) entities?

C18a) History repeats X

M-aa    no    mu-bbañ-e    mu-baj  
CL-GEN then CL-return-PFV CL-have

b) This type of fish cannibalizes X

Su-ol    s-e            si-tiñ-or-e  
CL-fish CL-DEM CL-eat-RCM-PFV

c) This machine destroys X (e.g., after you use it)

É-masin ye e-gal-om  
CL-machine CL-DEM CL-destroy-1<sup>st</sup>.SG.OBJ

d) É-masin    ye            e-gal-e

CL-machine CL-DEM CL-destroy-PFV

The difference between (C18c) and (C18d) is that in (C18c) it is implied that I am responsible for the destruction whereas in (C18d), such a reading is not available.

4.1.3.3 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 judgements for the following sentences, where X is a pronoun corresponding to the subject successfully, or X is the anaphoric (reflexive) strategy that achieves a reflexive (coconstrued) reading.

C19a) Every woman saw X.

Anaare anoan            na-jug-oro-e  
Woman each/every SM.3rd.SG-see-RFM-PFV

b) Every child washed X.

---

<sup>19</sup> ‘admires’ replaced by ‘likes’



A-ññil anoan na-pos-o-e  
C1-child each/every SM.3rd.SG-wash-IRF-PFV

c) Every student hates X.

A-lekkol-a anoan na-lal-oro-e  
C1-student-AGENT each/every SM.3rd.SG-hate-RFM-PFV

d) Every child saw a snake near X.

A-ññil anoan na-jug-e e-nuxunjang ni ga-lamb-ol  
C1-child each/every SM.3rd.SG-see-PFV C3-snake PREP C9-side-3<sup>rd</sup>.SG.POSS

e) Every child telephoned X's mother.

A-ññil anoan na-wog-e ja-ol ni telefon  
C1-child each/every SM.3rd.SG-call-PFV mother-3<sup>rd</sup>.SG.POSS PREP telefon

f) Every child's father like<sup>20</sup> X.

Pay a-ññil anoan na-mang-oro-e  
father C1-child each/every SM.3rd.SG-like-RFM-PFV

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

R19a) No woman saw X.

Xani Anaare (anur) a-jug-oro-ut  
no Woman one SM.3rd.SG-see-RFM-NEG

b) No child washed X.

Xani A-ññil (anur) a-pos-o-ut  
no C1-child one SM.3rd.SG-wash-IRF-NEG

c) No student hates X.

Xani a-lekkol-a (anur) a-lal-oro-ut  
no C1-student-AGENT one SM.3rd.SG-hate-RFM-NEG

d) No child saw a snake near X.

Xani a-ññil (anur) a-jug-ut e-nuxunjang ni ga-lamb-ol  
no C1-child one SM.3rd.SG-see-NEG C3-snake PREP C9-side-3<sup>rd</sup>.SG.POSS

e) No child telephoned X's mother.

Xani a-ññil (anur) a-wog-ut ja-ol ni telefon  
no C1-child one SM.3rd.SG-call-NEG mother-3<sup>rd</sup>.SG.POSS PREP telefon

f) No child's father admires X.

---

<sup>20</sup> 'admires' replaced by 'likes'

Xani Pay a-ññil (anur) a-mang-oro-ut  
no father C1-child one SM.3rd.SG-like-RFM-NEG

#### 4.1.3.5 Questioned antecedents –

COMMENT: Only fronted questions are allowed.

C20a) Who saw X?

Ai a-jug-oro-e?  
who SM.3rd.SG-see-RFM-PFV

b) Who washed X?

Ai a-pos-o-e?  
who SM.3rd.SG-wash-IRF-PFV

c) Who saw a snake near X?

Ai a-jug-e e-nuxunjang ni ga-lamb-ol  
who SM.3rd.SG-see-PFV C3-snake PREP C9-side-3<sup>rd</sup>.SG.POSS

d) Who telephoned X's mother?

Ai a-wog-e ja-ol ni telefon?  
who SM.3rd.SG-call-PFV mother-3<sup>rd</sup>.SG.POSS PREP telefon

e) Whose father like<sup>21</sup> X?

Ai pay-ol a-mang-oro-e?  
who father-3<sup>rd</sup>.SG.POSS SM.3rd.SG-like-RFM-PFV

4.1.3.6 Reverse binding - In the following examples, the full NP ('antecedent') appears in the lower (prototypically, object) position.

COMMENT: The reflexive markers being affixes suffixed to the verb, they cannot occur in the X position in any of the sentences below.

C21a) X saw Fred.

\*-oro na-jug-e Fred  
RFM SM.3rd.SG-see-PFV Fred

b) X saw us. (X=us)

\*-oro na-jug-óli  
RFM SM.3rd.SG-see-1<sup>st</sup>.PL.OGJ

c) X saw a snake behind Fred.

\*-oro na-jug-e e-nuxunjang ni ga-lamb Fred  
RFM SM.3rd.SG-see-PFV C3-snake PREP C9-side Fred

d) X worried<sup>22</sup> Fred

---

<sup>21</sup> 'admires' replaced by 'likes'

<sup>22</sup> Impressed replaced by worried

\*-oro na-kkan-e Fred ga-jaxali  
RFM SM.3rd.SG-put-PFV Fred c9-worry

e) Bill spoke to X about Fred.

\*Bil na-lob-e ni -oro m-aa Fred  
Bil SM.3rd.SG-speak-PFV PREP RFM c15-POSS Fred

f) Bill told X about Fred

\*Bil na-lob-oro-e maa Fred.  
Bil SM.3rd.SG-speak-RFM-PFV c15-POSS Fred

g) X was praised by Fred.

\*-oro na-sal-i'  
RFM SM.3rd.SG-praise.PASS

h) X is liked by you. (X = you)

\*-oro na-mang-i'  
RFM SM.3rd.SG-like.PASS

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.

None of the sentences in C22 is possible in Eegimaa, unless the pronoun is followed by the use of an r-expression which is co-referential to that pronoun. As can be seen in the first sentence in each of the pairs, the use of the pronoun alone in that position yields ungrammaticality. However, the noun 'George' is added after the pronoun, the outcome is a perfectly well-formed sentence, although it has an emphatic reading.

C22a) X telephoned George's mother.

\*Açila na-wog-e jai Sorus<sup>23</sup> ni telefon.  
PRN.3<sup>rd</sup>.SG SM.3rd.SG-call-PFV mother George PREP telephone

Açila Sorus na-wog-e ja-ol ni telefon.  
PRN.3<sup>rd</sup>.SG George SM.3rd.SG-call-PFV mother-3<sup>rd</sup>.SG.POSS PREP telephone

b) X's mother wanted to improve George.

\*Jai açila na-mang-e e-nab-en Sorus  
PRN.3<sup>rd</sup>.SG SM.3rd.SG-want-PFV c3-good-CAUS George

Jai açila Sorus na-mang-e e-nab-en-ol  
mother PRN.3<sup>rd</sup>.SG George SM.3rd.SG-want-PFV c3-good-CAUS-3<sup>rd</sup>.SG.OBJ

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<sup>23</sup> George in Eegimaa

c) X's mother worried/impressed George.

\*Jai açila na-kkan-e Sorus ga-pinor.  
mother PRN.3<sup>rd</sup>.SG SM.3<sup>rd</sup>.SG-put-PFV George C9-thought

Jai açila Sorus na-kkan-ol ga-pinor  
mother PRN.3<sup>rd</sup>.SG George SM.3<sup>rd</sup>.SG-put-3<sup>rd</sup>.SG.OBJ C9-thought

d) Mary told X's mother about George.

\*Mari na-lob-e jai açila maa Sorus.  
Mary SM.3<sup>rd</sup>.SG-tell-PFV mother PRN.3<sup>rd</sup>.SG C15-gen George

Mari na-lob-e jai açila Sorus maa Sorus.  
Mary SM.3<sup>rd</sup>.SG-tell-PFV mother PRN.3<sup>rd</sup>.SG George C15-GEN George

e) A picture of X's mother fell on George.

\*É-foto y-aa jai açila e-lo-e ni Sorus  
c3-picture c17-GEN mother PRN.3<sup>rd</sup>.SG PRN.C3.SG-fall-PFV PREP George

É-foto y-aa jai açila Sorus e-lo-e ni o.  
c3-picture c17-GEN mother PRN.3<sup>rd</sup>.SG George PRN.C3.SG -fall-PFV PREP PRN.3<sup>rd</sup>.SG

f) A picture of X's mother pleased George.

\*É-foto y-aa jai açila e-kkan-e Sorus e-ssum-ay  
c3-picture c17-GEN mother PRN.3<sup>rd</sup>.SG PRN.C3.SG -make-PFV George C3-good-NOM

É-foto y-aa jai açila Sorus e-kkan-ol é-ssum-ay  
c3-picture c17-GEN mother PRN.3<sup>rd</sup>.SG George PRN.C3.SG -make-3<sup>rd</sup>.SG.OBJ C3-good-NOM

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) The women help X.

R23a) W-aare wawu gu-ramben-or-e  
C18-woman C18.DEF PRN-help-RCM-PFV

R23b) W-aare wawu gu-ramben-oro-e  
C18-woman C18.DEF PRN-help-RFM-PFV

Which of the following meanings can this example have? Say which it can have and which it can't have. We will say that if the form in place of X permits at least (C24a) or (C24f) as a reading, then the form in question permits a reciprocal interpretation.

- 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.
- f) Each woman helps one of the women other than herself, such that all of the women are helped by one of the others.

Remarks: *If I were answering this for English, I would say for themselves in place of X that (C24d,e) are clearly possible, while (C24b,c) are possible, but maybe not the first interpretations I would think of. However, (C24b,c) are not possible. On the other hand, if I were answering for each other, (C24a,e) are clearly possible and probably (C24f), but not (C24b,d), and I am not sure about (C24c).*

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

C25a) The women praised X.  
W-aare wawu gu-sadd-oro-e  
C18-woman C18.DEF SM.3rd.PL-praise-RFM-PFV

The women themselves praised themselves. Here there is no collective reading but only a reflexive reading.

W-aare wawu gu-sadd-oro-e  
C18-woman C18.DEF SM.3rd.PL-praise-RCM-PFV

This example can be interpreted as reciprocal or associative. Both readings are available, although the reciprocal reading is more salient.

- b) The women will support X.  
W-aare wawu pan gu-ramben-or  
C18-woman C18.DEF FUT SM.3rd.PL-help-RCM
  
- W-aare wawu pan gu-ramben-oro  
C18-woman C18.DEF FUT SM.3rd.PL-help-RFM

c) The women photographed X.

W-aare      wawu      gu-ngar-or-e      su-foto  
C18-woman C18.DEF SM.3rd.PL-take-RCM-PFV C4-picture

W-aare      wawu      gu-ngar-oro-e      su-foto  
C18-woman C18.DEF SM.3rd.PL-take-RFM-PFV C4-picture

d) The women betrayed X.

W-aare      wawu      gu-lu-or-e      fa-lu  
C18-woman C18.DEF SM.3rd.PL-hole-RCM-PFV C6-hole

W-aare      wawu      gu-lu-oro-e      fa-lu  
C18-woman C18.DEF SM.3rd.PL-hole-RFM-PFV C6-hole

In examples (C25b&d), the associative reading is also there. However, due to the semantics of the verbs *eremben* and *elu falu*, the associative reading is less transparent, compared to all the two other cases in this example set.

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?

*-oro* only permits reflexive reading whilst *-or* permits both. It should be added that *-o* is also another strategy which permits only reflexive readings.

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."

R25a) U-ññil      wawu      gu-ful-or-e  
C8-child C18.def SM.3rd.PL-cover-RFM/RCM-PFV  
The children covered themselves/each other.

R25b) Su-jur      sasu      gu-xof-or-e  
C4-girl C4.DEF SM.3rd.PL-scratch-RFM/RCM-PFV  
The girls scratched themselves/each other.

4.1.4.2 Reciprocal readings - Complete this section only if your strategy allows a reciprocal reading (i.e., permits a reading like those in (C24a) or (C24f). 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"

b) Does the strategy allow the constructions where X is understood to be a reciprocal which has a

plural antecedent consisting of John and Bill (i.e., it would be understood as "John and Bill saw each other"). Are both "see" and "meet" possible in (C27), or is only one sort of verb acceptable?

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

c) Is there any difference in the range of interpretations permitted for (C28a) as opposed to (C28b), or any difference in reciprocal strategies that support these interpretations? 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).

C28a) John and Mary praised X.

b) The women praised X.

Remarks: *In some languages, a different reciprocal is favored or required when the antecedent phrase refers to pairs (or perhaps distributed groups) rather than large pluralities.*

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

C29a) John and Mary spoke to X.

b) John and Mary met with X.

c) John and Mary gave this book to X.

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 and Mary think that they like X.

#### 4.1.4.3 Sociative readings

Please translate these sentences, more than one way, if possible. Please be sure to let us know if an of the reciprocal or reflexive strategies can be used to achieve these readings.

C31a) The baboons left together

Si-ñaru sasu si-ja-or-e  
C4-baboon C4.DEF PRN.C4.3<sup>rd</sup>.PL-leave-ASS-PFV

Si-ñaru sasu si-ja-e ni m-anur  
C4-baboon C4.DEF PRN.C4.3<sup>rd</sup>.PL-leave-PFV PREP C15-one  
(lit: The baboon left at once)

b) The baboons ate fish together

Si-ñaru sasu si-tiñ-or-e  
C4-baboon C4.DEF PRN.C4.3<sup>rd</sup>.PL-eat-ASS-PFV

Si-ñaru sasu si-tiñ-e ni m-anur  
C4-baboon C4.DEF PRN.C4.3<sup>rd</sup>.PL-eat-PFV PREP C15-one  
(lit: the baboon ate at once)

#### 4.1.4.4 Antipassive readings

C32a) That panther bites people.

Jiggaj yauyu nah' e-run-dum bug-an  
panther C17.DEM.MED HAB C3-RED-bite C2-person

b) The government arrests people.

Guvverunama yai nah'e-jo-jox bug-an  
Government C17.DEF HAB C3-catch C2-person

c) Bill praises people

Bil nah' a-sas-sal bag-an  
Bil HAB SM.3rd.SG-RED-praise C2-person

## 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 ZIII  
"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, OK SE = Marie)  
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) where SE=Jean (the reading with Marie fails for another reason).

X9)\*\*Jean s'a dit que Marie aime. (SE=Jean, Marie)  
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 (it represents the object the verb 'love' of the lower clause) and yet SE must be itself closer to its antecedent than embedding in a tensed sentence allows, so neither reading (Jean or Marie for SE) succeeds in French. What does succeed in French for Jean as

antecedent is (X10) (which employs an independent pronoun in the form of a clitic) but not (X11), where the clitic corresponding to the object of "love" has moved from the lower verb to the higher one, again moving too far from its thematic source (the object of 'love'). In other words, it looks like it is a function of clitics, whether SE or pronominal, to be close to their thematic source, but what can count as the antecedent is different, in that SE must have a local antecedent and the clitic pronoun must not.

X10) Jean a dit que Marie l'aime. (OK pronominal l' = Jean, \*pronominal l' = Marie)  
 Jean has said that Marie him-loves  
 "Jean has said that Marie loves him."

X11)\*Jean l'a dit que Marie aime. (clitic pronoun = Jean/Marie)  
 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. It is just as important to tell us which readings do not work as it is to tell us which readings do, so please pay particular attention to indicating which is which.

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 said that X is smart.

Saak na-ag-e açila na-jag-e  
 Jack SM.3rd.SG-say-PFV PRN.3rd.SG SM.3rd.SG-smart-PFV

b) Jack knows that George likes X.

Saak na-ffas-e buox Sorus na-namang-ol  
 Jack SM.3rd.SG-know-PFV comp George SM.3rd.SG-like-3rd.SG.OBJ

c) Jack knows that Bill said that X is smart.

\*Saak na-ffas-e buox Bil na-ag-e açila na-jag-e  
 Jack SM.3rd.SG-know-PFV COMP Bill SM.3rd.SG-say-PFV PRN.3rd.SG SM.3rd.SG-smart-PFV

d) Jack thinks that Lisa knows that Wendy likes X.

Saak na-jog-e buox Lisa na-ffas-e buox Wendi na-mang-ol  
 Jack SM.3rd.SG-hold-PFV COMP Lisa SM.3rd.SG-know-PFV COMP Wendi SM.3rd.SG-like-3rd.SG.OBJ

This sentence is ambiguous since *-ol* can refer to either Jack or Lisa. But the sentence is perfectly

fine.

e) Jack thinks that Lisa knows that X likes Alice.

\*Saak na-jog-e buox Lisa na-ffas-e buox açila na-mang-e Alice  
Jack SM.3rd.SG-hold-PFV COMP Lisa SM.3rd.SG-know-PFV COMP PRN.3<sup>rd</sup>.SG SM.3rd.SG-like-  
PFV Alice

f) Sarah told Jack that Lisa loves X.

Sara na-ag-e Saak Lisa na-mang-ol  
Sara SM.3rd.SG-say-PFV Jack Lisa SM.3rd.SG-like-3<sup>rd</sup>.SG.OBJ

g) Sarah told Jack that X loves Wendy.

\*Sara na-ag-e Saak açila na-mang-e Wendi  
Sara SM.3rd.SG-say-PFV Jack PRN.3<sup>rd</sup>.SG SM.3rd.SG-like-PFV Wendy

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 independent pronouns, as in the French case above (and it is what is often employed for English as well), 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 (loosely speaking, pronouns that are used for the person whose perspective is being reported - there will be more on these later).

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.

D2a) Jack admitted that Mary loved X.

Saak a-cceng-ut buox Mari na-mang-ol  
Jack SM.3rd.SG-deny-NEG COMP Mary SM.3rd.SG-like-3<sup>rd</sup>.SG.OBJ  
(Lit: Jack didn't deny that Mary loves him)

b) Jack suspected that Mary loved X.

Saak nogor-ol-nogor tii Mari nah' a-mang-ol me  
Jack RED-3<sup>rd</sup>.SG.OBJ-resemble like Mary HAB SM.3rd.SG-like-3<sup>rd</sup>.SG.OBJ MOOD  
(Lit: 'it resembles to Jack that Mary loves him')

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

D3a) Jeff complained about Mary when Ella blamed X

Jef na-lol-lob-en                    maa        Mari no        Ella a-nnur-ol                    me  
 Jef SM.3RD.SG-RED-talk-ITER C15-POSS Mary when Ella SM.3RD.SG-blame-3<sup>rd</sup>.SG.OBJ  
 MOOD

b) Jeff returned home when/before/after X became tired.

Jef na-ol-e    no mu-fang-ol me  
 Jef SM.3RD.SG-return.home-PFV when prn.15-tire-3<sup>rd</sup>.SG.OBJ MOOD

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

No    Mari a-binda-ol    me,    Jef na-ot.  
 when Mary SM.3RD.SG-write-3<sup>rd</sup>.SG.OBJ MOOD Jeff SM.3RD.SG-return.home

d) Jeff left without Mary seeing X.

Jef na-kkay-e Mari m'-ba-ju-t-ol  
 Jeff SM.3RD.SG-leave-PFV Mary con PFV-see-neg-3<sup>rd</sup>.SG.OBJ

e) Mary condemned Jeff without knowing<sup>24</sup> X.

Mari na-cceng-e    Jef o    m' ba-ffa-t-ol.  
 Mary SM.3RD.SG-condemn-PFV Jef PRN.3<sup>rd</sup>.SG CON PFV-see-NEG-3<sup>rd</sup>.SG.OBJ

We are naturally interested if there is any difference in the way that complements and adjuncts behave.

Please do not forget to test reciprocal strategies in these long distance contexts (adjusting for plural antecedents), but if none of them work, it is not necessary to provide examples for all of them. Just let us know. However, if any of the distinctions above reveal contrasts such that some permit reciprocals and others don't please let us know and we will probably be interested in some follow-up questions.

RD3f) Jef na-kkay-e    bugo    ni    Mari m'-ba-jug-or-ut  
 Jeff SM.3RD.SG-leave-PFV PRN.3<sup>rd</sup>.PL CONJ Mary CON PFV-see-RCM-NEG

g) Sali na-ag-e    Musa na-ffas-e    buox bugo    ni    Mari gu-jug-or-e  
 Sali SM.3rd.SG-say-PFV Musa SM.3rd.SG-know-PFV COMP PRN.3<sup>rd</sup>.PL CONJ Mary SM.3rd.PL-see-RCM-PFV

h) Saak na-jog-e    buox Lisa na-ffas-e    buox bugo    ni    Alice gu-mang-or-e  
 Jack SM.3rd.SG-hold-PFV COMP Lisa SM.3rd.SG-know-PFV COMP PRN.3<sup>rd</sup>.PL CONJ Alice SM.3rd.PL-see-RCM-PFV

The attachment of the subject agreement marker to the verb to which the reciprocal marker is attached and/or the actual use of a subject pronoun very close to the verb to which the reciprocal form is attached licenses the correct use of the reciprocal strategy.

Please also let us know if differences in gender, plurality or person make a difference for which strategy succeeds. For example, if you replace Jack in all of the Jack sentences with first

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<sup>24</sup> 'meet' is replaced by 'know'

person "I" or second person "you" does the pattern change in any way? If so, we will follow up about this in section 4.4, so set it aside for now.

4.2.1.2 Climbing from tensed complements - This test applies particularly to reflexives in close association with a verb, either as affixes or clitic pronouns, but there are some languages where a form of focus movement can place a more an argument-marked anaphor in a higher clause.

Change the examples in the previous section so that the higher verb is marked (but the sentence still expresses coreference with an argument of the embedded clause). For example, this sort of climbing is possible in French if the clause is of a very minimal type (a "small clause"), as in John se croix intelligent, interpreted as "John believes [himself (to be) intelligent.]"

- i) Jon na-jog-e buox na-jag-e  
John SM.3rd.SG-hold-PFV COMP SM.3rd.SG-smart-PFV  
'John thinks that he is smart'
- j) Jon na-jog-oro-e an a-jag-e  
John SM.3rd.SG-hold-RFM-PFV c1.person SM.3rd.SG-smart-PFV  
'John thinks himself to be a smart person'

#### 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, besides tensed complements like those in the last subsection, infinitives, bare infinitives, gerunds, subjunctives (a lexically restricted class) and small clauses, each of which are illustrated in brackets in (X12).

X12a) I hope [to leave]

Ni-jikki-e buox pan i-jow  
SM.1st.SG-hope-PFV COMP FUT SM.1st.SG-leave

I hope [for Bill to leave]

Ni-jikki-e buox Bil pan a-jow  
SM.1st.SG-hope-PFV COMP Bill FUT SM.3rd.SG-leave

I expect [Bill to be unpleasant]

Ni-jog-e buox Bil mati sum-ol  
SM.1st.SG-hold-PFV COMP Bill NEG please-3<sup>rd</sup>.SG.OBJ

I persuaded Bill [to leave]

Ni-butor-e ni Bil min a-jow  
SM.1st.SG-persuade-PFV prep Bill COMP SM.3rd.SG-leave

b) I made [Bill leave]

Ni-kkan-e                    Bil n' a-jow  
SM.1st.SG-make-PFV Bill PREP SM.3rd.SG-leave

c) I saw [someone leaving]

Ni-jug-e                    a-cce n' e-jow  
SM.1st.SG-make-PFV C1-INDEF PREP C3-leave

d) I require [that he speak softly]

Ni-jjien-e                    buox a-lob                    á-laf-en  
SM.1st.SG-serious-PFV COMP SM.3rd.SG-speak SM.3rd.SG-soft-CAUS  
(Lit: I am serious that he speak softly)

e) I consider [Bill unpleasant]

Ni-jog-e                    Bil an                    a-war-at  
SM.1st.SG-consider-PFV Bill C1.person REL-GOOD-NEG  
(Lit: I consider Bill a person who is bad)

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 types allowed in your language (which may be radically fewer than those in English, or may involve types of complementation not found in English). Then test each clausal type for the success or failure of each coreference strategy.

For subjunctives, if your language permits them and 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), and where X = Edgar, we want you to give us a range of examples where the infinitive subject is not controlled by the matrix subject. In other words, the understood subject of the infinitive (the understood giver or talker) should never be Edgar, but Bill (or else we will actually testing just a clausemate strategy instead of a long distance one). Thus in (D4a), for example, Bill is understood to be the one trusting, and we want to test whether or not X could be Edgar, and if so, which form makes the possible (in English, it is the otherwise independent pronoun him).

D4a) Edgar asked Bill to trust X.

Edigar na-ag-e                    Bil a-ffim-ol  
Edgar SM.3rd.SG-say-PFV Bill SM.3rd.SG-trust-3<sup>rd</sup>.SG.OBJ

b) Edgar asked Bill to give a book to X.

Edigar na-ag-e                    Bil a-sen-ol                    é-l-libur  
Edgar SM.3rd.SG-say-PFV Bill SM.3rd.SG-give-3<sup>rd</sup>.SG.OBJ 3C-book

c) Edgar asked Bill to talk to X.

Edigar naa-ge                    Bil a-lob                    ni o  
Edgar SM.3rd.SG-say-PFV Bill SM.3rd.SG-talk PREP PRN.3<sup>rd</sup>.SG

d) Edgar asked Bill to talk about X.

Edigar na-ag-e Bil a-lob m-ola  
Edgar SM.3rd.SG-say-PFV Bill SM.3rd.SG-talk C15-POSS

e) Edgar expected Bill to trust X.

Edigar na-jog-e buox Bil pan a-ffim-ol  
Edgar SM.3rd.SG-hold-PFV COMP Bill FUT SM.3rd.SG-trust-3<sup>rd</sup>.SG.OBJ

f) Edgar ordered Bill to pay X.

Edigar na-kkan-e Bil na-ccam  
Edgar SM.3rd.SG-make-PFV Bill SM.3rd.SG-pay

g) Edgar ordered Bill to say that X was smart.

Edigar na-kkan-e Bil na-ax o na-jag-e  
Edgar SM.3rd.SG-make-PFV Bill SM.3rd.SG-say PRN.3<sup>rd</sup>.SG SM.3rd.SG-smart-PFV

h) Edgar ordered Bill to say that Mary loved X.

Edigar na-kkan-e Bil na-ax Mari na-mang-ol  
Edgar SM.3rd.SG-make-PFV Bill SM.3rd.SG-say Mary SM.3rd.SG-smart-PFV

If infinitives in your language permit lexical subjects, either by exceptional Casemarking, as in (D5), or by a more general strategy (in English tied to the complementizer for) as in (D6), please also provide examples of this type.

D5a) Edgar expects X to win.

Edigar na-jog-e buox o pan a-xex  
Edgar SM.3rd.SG-hold-PFV COMP PRN.3<sup>rd</sup>.SG FUT SM.3rd.SG-win

b) Edgar expects Bill to defeat X.

Edigar na-jog-e buox Bil pan a-xex-ol.  
Edgar SM.3rd.SG-hold-PFV COMP Bill FUT SM.3rd.SG-win-3<sup>rd</sup>.SG.OBJ

D6a) Edgar hopes for X to win.

Edigar ná-baindi-e buox o pan a-xex  
Edgar SM.3rd.SG-hope-PFV COMP PRN.3<sup>rd</sup>.SG FUT SM.3rd.SG-win

b) Edgar hopes for Bill to defeat X.

Edigar ná-baindi-e buox Bil pan a-xex-ol.  
Edgar SM.3rd.SG-hope-PFV COMP Bill FUT SM.3rd.SG-win-3<sup>rd</sup>.SG.OBJ

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

D7a) Edgar expects Bill to defeat X's brother.

Edigar na-jog-e buox Bil pan a-xex a-tti-ol.  
Edgar SM.3rd.SG-hold-PFV COMP Bill FUT SM.3rd.SG-win C1-brother-3<sup>rd</sup>.SG.POSS

b) Edgar hopes for Bill to defeat X's brother.

Edigar ná-baindi-e Bil min imbi pan a-xex a-tti-ol  
 Edigar SM.3rd.SG-hope-PFV Bill COMP MOOD FUT SM.3rd.SG-win c1-brother-  
 3<sup>rd</sup>.SG.POSS

Edigar ná-baindi-e buox Bil pan a-xex a-tti-ol  
 Edigar SM.3rd.SG-hope-PFV COMP Bill FUT SM.3rd.SG-win c1-brother-3<sup>rd</sup>.SG.POSS

c) Edgar expects X's brother to defeat him.

Edigar na-jog-e buox a-tti-ol pan a-xex-ol.  
 Edigar SM.3rd.SG-hold-PFV COMP c1-brother-3<sup>rd</sup>.SG.POSS FUT SM.3rd.SG-win-  
 3<sup>rd</sup>.SG.OBJ

d) Edgar hopes for Bill to defeat X's brother.

Edigar ná-baindi-e Bil min imbi a-xex a-tti-ol  
 Edigar SM.3rd.SG-hope-PFV Bill COMP MOOD SM.3rd.SG-win c1-brother-  
 3<sup>rd</sup>.SG.POSS

Edigar ná-baindi-e buox Bil pan a-xex a-tti-ol  
 Edigar SM.3rd.SG-hope-PFV COMP Bill FUT SM.3rd.SG-win c1-brother-3<sup>rd</sup>.SG.POSS

Now try all of these "Edgar" sentences with climbing, such that the X argument is raised into the matrix clause. If this is not possible at all, just say so and set the issue aside, but if it is possible for some sentence types and not others, please provide examples for each Edgar sentence. Such sentences might look something like (D5c,d) and (D6c,d), if they are possible at all (and abstracting away from VO/OV word order, etc.)

D5c) Edgar X-expects to win.

Edigar o na-jog-e buox pan a-xex.  
 Edigar PRN.3<sup>rd</sup>.SG SM.3rd.SG-hold-PFV COMP FUT SM.3rd.SG-win

d) Edgar X-expects Bill to defeat.

Edigar o na-jog-e buox Bil pan a-xex.  
 Edigar PRN.3<sup>rd</sup>.SG SM.3rd.SG-hold-PFV COMP Bill FUT SM.3rd.SG-win

D6c) Edgar X-hopes for to win.

Edigar o ná-baindi-e buox pan a-xex.  
 Edigar PRN.3<sup>rd</sup>.SG SM.3rd.SG-hope-PFV COMP FUT SM.3rd.SG-win

d) Edgar X-hopes for Bill to defeat.

Edigar o ná-baindi-e Bil min imbi a-xex.  
 Edigar PRN.3<sup>rd</sup>.SG SM.3rd.SG-hope-PFV Bill COMP MOOD SM.3rd.SG-win

Edigar ná-baindi-e Bil min imbi pan a-xex a-tti-ol  
 Edigar SM.3rd.SG-hope-PFV Bill CON mood FUT SM.3rd.SG-win c1-brother-  
 3<sup>rd</sup>.SG.POSS



If your language permits small clauses, such as English John considers Mary intelligent, where intelligent is thus predicated of Mary, then try the following tests, where X = Tom.

D8a) Tom considers X intelligent.

Tom na-jog-oro-e                      an                      a-jag-e  
Tom SM.3rd.SG-hold-RFM-PFV C1.person REL-smart-PFV

b) Tom considers Mary fond of X.

Tom na-jog-e Mari na-mang-ol  
Tom SM.3rd.SG-hold-RFM-PFV COMP Mary SM.3rd.SG-like-3rd.SG.OBJ

c) Tom considers Mary angry at X.

Tom na-jog-e                      Mari an                      o                      fi-iñ-ol                      fi-tin-ol  
Tom SM.3rd.SG-hold-RFM-PFV Mary C1.person PRN.3rd.SG C6-liver-3rd.SG.POSS PRN.C6.3rd.SG-3rd.SG.OBJ

Tom ni    Mari gu-jog-or-e                      bug-an    ga-jag-e  
Tom CONJ Mary SM.3rd.PL-hold-RCM-PFV C2.person PRN. 3rd.PL-smart-PFV

‘Tom and Mary consider themselves smart people’ = Tom considers Mary smart and Mary considers Tom smart.

Remember to test all strategies, reciprocal and reflexive, for all of the clause types you provide evidence for. Be alert to differences in the person of the antecedent, but save your evidence about such cases for section 4.4. Finally, provide paradigms like the Jack, Edgar or Jeff paradigms for any form of embedding that we have not discussed up to now.

Note: If your language permits verb serialization, special issues may arise for some of the questions we have been raising. If this is the case, please let us know that verb serialization is possible in your language and alert us to any sorts of patterns that you think we might be interested in. We will address these issues in follow up research.

### 4.2.3 Backwards anaphora

If your language permits sentential subjects like those in D9, please indicate if coreference succeeds where X is a pronoun or anaphor construed with Oliver. Your language may not have a verb like implicate, but if so, try a verb that seems close, if possible. If your language does not permit clauses to be subjects without head nouns, then try something like “the fact that X was late upset Oliver.” *English permits the independent pronouns strategy to be used for such cases, but not all speakers like every example.*

D9a) That X was late upset Oliver.

Buox açila                      na-ratten-datten    tinnen-e Ólive ni    fi-iñ  
COMP PRN.3rd.SG SM.3rd.SG-RED-late hurt-PFV Oliver PREP C3-liver

b) That X was late suggested that Oliver was guilty.

Buox açila                      na-ratten-datten    yo                      e-emm-e                      tii    Ólivie nah’ a-til                      me.  
COMP PRN.3rd.SG SM.3rd.SG-RED-late PRN.C17.3rd.SG SM.3rd.SG-be-PFV PREP Oliver HAB SM.3rd.SG-guilty

MOOD

c) That X was late made Oliver look guilty.

Buox açila na-ratten-datten kak-kan Ólivie na-no tii nah' a-til me.  
COMP PRN.3rd.SG SM.3rd.SG-RED-late RED-make Oliver SM.3rd.SG-be PREP HAB SM.3rd.SG-guilty  
MOOD

d) That X was late gave away<sup>25</sup> Óliver.

Buox açila na-ratten-datten ses-sen Ólivie e-sux.  
COMP PRN.3<sup>rd</sup>.SG SM.3rd.SG-RED-late RED-give Oliver C3-people

### Section 4.3 Principle C-type effects

In English it is not possible to interpret he=Malik or he=the boy in (E1), except in some exceptional discourse circumstances such as extra stress and/or focus (and then not for everybody). For all of these examples, give judgments that indicate whether or not it is possible in normal discourse circumstances for the pronoun to be either Malik or the boy.

E1a) He criticized Malik.

\*Açila<sup>1</sup> ná-jising-e Malik<sup>1</sup>  
PRN.3rd.SG SM.3rd.SG- criticize-PFV Malik

b) He said Mariam criticized Malik.

\*Açila<sup>1</sup> Na-ag-e Mariam ná-jising-e Malik<sup>1</sup>  
PRN.3rd.SG SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV Malik

c) He criticized the boy.

\*Açila<sup>1</sup> ná-jising-e [á-pur ahu]<sup>1</sup>  
PRN.3rd.SG SM.3rd.SG- criticize-PFV C1-boy C1.DEF

d) He said Mariam criticized the boy.

\*Açila<sup>1</sup> na-ag-e Mariam ná-jising-e [á-pur ahu]<sup>1</sup>  
PRN.3rd.SG SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV C1-boy C1.DEF

In all the sentences above, the pronoun cannot refer to either Malik, nor can it refer to the boy.

E2a) His mother criticized Malik.

Ja-ol ná-jising-e Malik  
Mother-3<sup>rd</sup>.SG.POSS SM.3rd.SG- criticize-PFV Malik

The sentence in E2a is only acceptable if the mother is not Malik's mother. But if we are referring to Malik's mother, the sentence is not acceptable.

b) His mother said Mariam criticized Malik.

Ja-ol na-ag-e Mariam ná-jising-e Malik

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<sup>25</sup> implicate replaced by gave away

Mother-3<sup>rd</sup>.SG.POSS SM.3<sup>rd</sup>.SG- say-PFV Mariam SM.3<sup>rd</sup>.SG- criticize-PFV Malik  
 Here too, in order for the sentence to be acceptable, the possessive phrase ‘his mother’ has to refer to someone else other than Malik’s mother.

c) His mother criticized the boy.

Jaol ná-jising-e á-pur ahu  
 Mother-3<sup>rd</sup>.SG.POSS SM.3<sup>rd</sup>.SG- criticize-PFV C1-boy C1.DEF

Assuming that the mother is not the boy’s mother. If it’s the boy’s mother, the sentence will be ungrammatical.

d) His mother said Mariam criticized the boy.

Jaol na-ag-e Mariam ná-jising-e á-pur ahu  
 Mother-3<sup>rd</sup>.SG.POSS SM.3<sup>rd</sup>.SG- say-PFV Mariam SM.3<sup>rd</sup>.SG- criticize-PFV C1-boy  
 C1.DEF

E3a) The man who he liked criticized Malik

\*Á-ine ahu o Açıla<sup>2</sup> a-mang me ná-jising-e Malik<sup>2</sup>  
 c1-man c1.def rel PRN.3<sup>rd</sup>.SG SM.3<sup>rd</sup>.SG-like MOOD SM.3<sup>rd</sup>.SG- criticize-PFV Malik

b) The man who he liked criticized the boy.

\*Á-ine ahu o Açıla<sup>2</sup> a-mang me ná-jisinge [á-pur ahu]<sup>2</sup>  
 C1-man C1.DEF REL PRN.3<sup>rd</sup>.SG SM.3<sup>rd</sup>.SG-like MOOD SM.3<sup>rd</sup>.SG- criticize-PFV C1-boy  
 C1.DEF

The pronoun *açıla* cannot refer to the boy or to Malik.

c) The man who liked him<sup>2</sup> criticized the boy<sup>2</sup>.

\*Á-ine ahu a-mang-[ol]<sup>2</sup> me ná-jising-e [á-pur ahu]<sup>2</sup>  
 C1-man C1.DEF REL-like-3<sup>rd</sup>.SG.OBJ MOOD SM.3<sup>rd</sup>.SG- criticize-PFV C1-boy C1.DEF

The object pronoun *-ol* has to refer to someone else other than the boy.

Now consider whether or not, in place of the pronoun, the name Malik could work as the antecedent for either Malik or the boy could work as the antecedent for the boy in the following sentences, again, paying attention to whether special discourse circumstances must be appealed to make the sentence sound natural (e.g., in English, (E4a) would sound natural if preceded by “Everyone criticized Malik. Bill criticized Malik, Mary did, and even Malik criticized Malik”, but this is one example of what I mean by a special discourse circumstance).

E4a) Malik criticized Malik.

\*Malik<sup>1</sup> ná-jising-e Malik<sup>1</sup>  
 Malik SM.3<sup>rd</sup>.SG- criticize-PFV Malik

b) Malik said Mariam criticized Malik.

\*Malik<sup>1</sup> na-ag-e Mariam ná-jising-e Malik<sup>1</sup>

Malik SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV Malik

c) The boy criticized the boy.

\*[Á-pur ahu]<sup>1</sup> ná-jising-e [á-pur ahu]<sup>1</sup>  
C1-boy C1.DEF SM.3rd.SG- criticize-PFV C1-boy C1.DEF

d) The boy said Mariam criticized the boy.

\*[Á-pur ahu]<sup>1</sup> na-ag-e Mariam ná-jising-e [á-pur ahu]<sup>1</sup>  
C1-boy C1.DEF SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV C1-boy  
C1.DEF

All the sentences in E5 are perfectly fine. Replacing ‘the boy’ or ‘Malik’ by the object suffix -ol is grammatical too but, it raises some ambiguity since it can also refer to someone else other than ‘the boy’ or ‘Malik’. So the repetition of ‘the boy’ and ‘Malik’ provides a clearer context for the interpretation of the sentences.

E5a) Malik’s mother criticized Malik.

Jai Malik ná-jising-e Malik  
mother Malik SM.3rd.SG- criticize-PFV Malik

b) Malik’s mother said Mariam criticized Malik.

Jai Malik na-ag-e Mariam ná-jising-e Malik  
mother Malik SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV Malik

c) The boy’s mother criticized the boy.

Jai á-pur ahu ná-jising-e á-pur ahu  
mother C1-boy C1.DEF SM.3rd.SG- criticize-PFV C1-boy C1.DEF

d) The boy’s mother said Mariam criticized the boy.

Jai á-pur ahu na-ag-e Mariam ná-jising-e á-pur ahu  
mother C1-boy C1.DEF SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV C1-boy  
C1.DEF

E6a) The man who Malik liked criticized Malik

À-ine ahu o Malik a-mang me ná-jising-e Malik  
C1-man C1.DEF REL Malik SM.3rd.SG-like MOOD SM.3rd.SG- criticize-PFV Malik

b) The man who the boy liked criticized the boy.

À-ine ahu o á-pur ahu a-mang me ná-jising-e á-pur ahu  
C1-man C1.DEF REL C1-boy C1.DEF SM.3rd.SG-like MOOD SM.3rd.SG- criticize-PFV C1-boy  
C1.DEF

c) The man who liked the boy criticized the boy.

À-ine ahu a-mang me á-pur ahu ná-jisinge á-pur ahu

C1-man C1.DEF REL-like MOOD C1-boy C1.DEF SM.3rd.SG- criticize-PFV C1-boy  
C1.DEF

Now consider whether the boy = Malik for the following examples

In the sentences in E7, Malik and the boy are two different people.

E7a) The boy criticized Malik.

Á-pur ahu ná-jising-e Malik  
C1-boy C1.DEF SM.3rd.SG- criticize-PFV Malik

b) The boy said Mariam criticized Malik.

Á-pur ahu na-ag-e Mariam ná-jising-e Malik  
C1-boy C1.DEF SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV Malik

c) Malik criticized the boy.

Malik ná-jising-e Á-pur ahu  
Malik SM.3rd.SG- criticize-PFV C1-boy C1.DEF

d) Malik said Mariam criticized the boy.

Malik na-ag-e Mariam ná-jising-e Á-pur ahu  
Malik SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV C1-boy C1.DEF

As in E7, in E8 the boy and Malik have to be two different people for the sentence to be grammatical.

E8a) The boy's mother criticized Malik.

Jai á-pur ahu ná-jising-e Malik  
mother C1-boy C1.DEF SM.3rd.SG- criticize-PFV Malik

b) The boy's mother said Mariam criticized Malik.

Jai á-pur ahu na-ag-e Mariam ná-jising-e Malik  
mother C1-boy C1.DEF SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV Malik

c) Malik's mother criticized the boy.

Jai Malik ná-jising-e á-pur ahu  
mother Malik SM.3rd.SG- criticize-PFV C1-boy C1.DEF

d) Malik's mother said Mariam criticized the boy.

Jai Malik na-ag-e Mariam ná-jising-e á-pur ahu  
mother Malik SM.3rd.SG- say-PFV Mariam SM.3rd.SG- criticize-PFV C1-boy C1.DEF

Same as in E7 and E8. Malik and the boy are not referring to the same person.

E9a) The man who the boy liked criticized Malik

Á-ine ahu o á-pur ahu a-mang me ná-jising-e Malik  
C1-man C1.DEF REL C1-boy C1.DEF SM.3rd.SG-like MOOD SM.3rd.SG- criticize-PFV

Malik

b) The man who Malik liked criticized the boy.

Áine ahu o Malik a-mang me ná-jising-e á-pur ahu  
C1-man C1.DEF REL Malik SM.3rd.SG-like MOOD SM.3rd.SG- criticize-PFV C1-boy  
C1.DEF

c) The man who liked Malik criticized the boy.

Á-ine ahu a-mang me Malik ná-jising-e á-pur ahu  
C1-man C1.DEF REL SM.3rd.SG-like MOOD Malik SM.3rd.SG- criticize-PFV C1-boy  
C1.DEF

d) The man who liked the boy criticized Malik

Áine ahu a-mang me á-pur ahu ná-jising-e Malik  
C1-man C1.DEF REL-like MOOD C1-boy C1.DEF SM.3rd.SG- criticize-PFV Malik

#### 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 or else it is an anaphor of a type that may be used in a more local strategy as well (to form reflexives, for example) . In many other languages, such as English, there is no long distance anaphor, and the independent pronoun strategy is used.

If your language uses a special pronoun for LDA, it may be that the special pronoun has other uses. In some languages a special pronoun of this type is particularly required when referring back to the reported speaker or believer (a logophoric antecedent), as in D10.

D10) *John* believes *he* is guilty.

In other words, a language with this strategy would have a special morphological form for he just in case he refers to John (but not if it refers to someone else). We will call this a "logophoric" pronoun strategy, and in some languages, this form of pronoun has only this use.. English does not have such a form, but if your language does, then we will eventually ask you more questions than those that are found in this section.

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.. In English, the independent pronoun strategy is all that works for these (i.e., where X= he or him). If your language is like English, then the reflexive form does not work in the position of X where X=Zeke. If your language does not use the simple independent pronoun, but another form, be sure to show not only the form that works, but the one that doesn't.

In Eegimaa, just like in English, X can refer to an independent pronoun or an object suffix. However, in some cases, it can refer to a r-expression

D11a) Larry told Zeke that Mike does not like X.

Lari na-ag-e Zeke Maik a-mang-ut-ol  
 Larry SM.3rd.SG-tell-PFV Zeke Mike SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

In (D11a) and also in sentences where something is reported to someone, the complementizer *buox* is usually omitted. Actually, when the complementizer is used in such of sentences, the outcome does not sound right.

b) Zeke told Larry that Mike does not like X.

Zeke na-ag-e Lari Maik a-mang-ut-ol  
 Zeke SM.3rd.SG-tell-PFV Larry Mike SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

c) Zeke told Larry that X does not like Mike.

Zeke na-ag-e Lari acila a-mang-ut Maik  
 Zeke SM.3rd.SG-tell-PFV Larry PRN.3<sup>rd</sup>.SG SM.3rd.SG-like-NEG Mike

d) Larry told Zeke that X does not like Mike.

\*Lari na-ag-e [Zeke]<sup>1</sup> [açila]<sup>1</sup> a-mang-ut Maik  
 Larry SM.3rd.SG-tell-PFV Zeke PRN.3<sup>rd</sup>.SG SM.3rd.SG-like-NEG Mike

This sentence is does not sound correct since the pronoun *açila* cannot refer to Zeke in that position but to Larry. Now, if it was an order or a suggestion for some action, *açila* in that position would indeed refer to Zeke (not Larry) and the sentence would be grammatical.

e) Larry knows that Zeke thinks that Mike does not like X.

Lari na-ffas-e buox Zeke na-jog-e buox Maik a-mang-ut-ol.  
 Larry SM.3rd.SG-know-PFV COMP Zeke SM.3rd.SG-hold-PFV COMP Mike SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

f) Zeke knows that Larry thinks that Mike does not like X.

Zeke na-ffas-e buox Lari na-jog-e buox Maik a-mang-ut-ol.  
 Zeke SM.3rd.SG-know-PFV COMP Larry SM.3rd.SG-hold-PFV COMP Mike SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

D12a) Zeke's mother thinks that Mike does not like X.

\*Jai [Zeke]<sup>1</sup> na-jog-e buox Maik a-mang-ut-[ol]<sup>1</sup>  
 mother Zeke SM.3rd.SG-hold-PFV COMP Mike SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

The object pronoun *-ol* cannot refer to Zeke but to Zeke's mother. If X refers to Zeke, then Zeke has to be explicitly mentioned for the sentence to be grammatical, as shown in (D12a2).

D12a2) Jai Zeke na-jog-e buox Maik a-mang-ut Zeke  
 mother Zeke SM.3rd.SG-hold-PFV COMP Mike SM.3rd.SG-like-NEG Zeke

b) Zeke's mother thinks that X does not like Mike.

Jai zeke na-jog-e buox Zeke a-mang-ut Maik.  
mother Zeke SM.3rd.SG-hold-PFV COMP Zeke SM.3rd.SG-like-NEG Mike

Here the use of the pronoun *açila* is not acceptable since it will refer to Zeke's mother instead of Zeke.

c) Zeke thinks that Mike does not like X.

Zeke na-jog-e buox Maik a-mang-ut-ol  
Zeke SM.3rd.SG-hold-PFV COMP Mike SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

d) Zeke's letter said that Mike does not like X.

e-letar Zeke e-eg-e buox Maik a-mang-ut-ol.  
C3-letter Zeke PRN.C3.3<sup>rd</sup>.SG-say-PFV COMP Malik SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

e) Zeke heard that Mary did not like X.

Zeke na-un-e buox Mari a-mang-ut-ol.  
Zeke SM.3rd.SG-hear-PFV COMP Mary SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

f) Zeke was told that Mary did not like X. (if your language permits passive)

Zeke gu-lob-ol buox Mari a-mang-ut-ol.  
Zeke SM.3rd.PL-tell-3<sup>rd</sup>.SG.OBJ COMP Mary SM.3rd.SG-like-NEG-3<sup>rd</sup>.SG.OBJ

D13a) Zeke said that X had dressed X.

Zeke na-ag-e açila na-ssim-o-e  
Zeke SM.3rd.SG-say-PFV PRN.3<sup>rd</sup>.SG SM.3rd.SG-dress-IRF-PFV

b) Zeke said that X had wounded X.

Zeke na-ag-e açila na-bukk-o-e  
Zeke SM.3rd.SG-say-PFV PRN.3<sup>rd</sup>.SG SM.3rd.SG-wound-IRF-PFV

c) Zeke said that X had shaved<sup>26</sup> X.

Zeke na-ag-e açila na-ccig-o-e  
Zeke SM.3rd.SG-say-PFV PRN.3<sup>rd</sup>.SG SM.3rd.SG-shave-IRF-PFV

Consider potential antecedents in other non-subject syntactic positions, as allowed by your language (e.g., in English, John related to Bill that Mary had slandered him where Bill = him).

RD13a) Bala na-ag-e [w-aare wawu]<sup>1</sup> Malik a-jel-[il]<sup>1</sup>  
Bala SM.3rd.SG-tell-PFV C18-woman C18.DEF Malik SM.3rd.SG-insult-3<sup>rd</sup>.PL.OBJ  
'Bala told the women that Malik insulted them'

b) Suntu na-ggiten-e [pay-ol]<sup>1</sup> too Bala a-xu-en-[ol]<sup>1</sup> me

<sup>26</sup> 'tattoo' replaced by 'shave'



Suntu SM.3rd.SG-show-PFV father-3<sup>rd</sup>.SG.POSS LOC Bala SM.3rd.SG-dirty-caus-3<sup>rd</sup>.SG.OBJ  
MOOD

‘Suntu showed his father where Bala wounded him’

c) W-aine wawu gu-og-e [a-wi ahu] mati gu-wañ-[ol]  
C18-man C18.DEF SM.3rd.PL-tell-PFV C1-king C1.DEF NEG SM.3rd.PL-cultivate-  
3<sup>rd</sup>.SG.OBJ

‘The man told the king that they will not cultivate for him’

In the examples in (RD13), the antecedents of the object pronouns are all in object position. In (RD13b), the sentence would have been ambiguous without the co-indexation since *-ol* can refer either to Suntu or his dad.

One of the Eegimaa people with whom I worked mentioned the frequent use of the object markers in Eegimaa proper nouns as well common nouns and the point he was making was that these forms are used even when the referent has never been mention in the discourse. Of course the referent is assumed to be accessible though cultural knowledge. Among the examples he gave me was the name of a woman called Aatolat. This name is actually a whole sentence, just like the name of the language (E-eg-i-maa ‘I-tell-you-this’).

A-a-t-ol-at

SM.3rd.SG-tell-neg-3<sup>rd</sup>.sg.obj-go.home

‘he didn’t tell her to go’ (He didn’t divorce her)

The point being make though this digression is that the use of pronouns in general requires a certain syntactic and/or cognitive prominence.

#### 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 (D13) in the Zeke paradigm.

Replacing Zeke by first and second pronoun yields similarities as well as differences. Let us consider the following examples.

d) Larry told me that X does not like Mike.

Lari na-ag-om inje i-mang-ut Maik  
Larry SM.3rd.SG-tell-1<sup>st</sup>.SG.OBJ PRN.1<sup>st</sup>.SG SM.1st.SG-like-NEG Mike

Larry told you that X does not like Mike.

Lari na-ag-i au u-mang-ut Maik  
Larry SM.3rd.SG-tell-2<sup>nd</sup>.SG.OBJ PNR.2<sup>nd</sup>.SG SM.2nd.SG-like-NEG Mike

We noted in (D12d) the sentence is not grammatical due to the position of *açila* vis-à-vis its antecedent Zeke. But by replacing Zeke by a first or second person pronouns, the outcome is perfectly fine. In the other cases in, the replacement of Zeke by first and second person pronouns

also yields grammatical forms with even a more straightforward reading.

D11a) Larry told me that Mike does not like X.

Lari na-ag-om Maik a-mang-ut-om  
Larry SM.3rd.SG-tell-1<sup>st</sup>.sg.obj Mike SM.3rd.SG-like-NEG-1<sup>st</sup>.sg.obj

Larry told you that Mike does not like X.

Lari na-ag-i Maik a-mang-ut-i  
Larry SM.3rd.SG-tell-2<sup>nd</sup>.sg.obj Mike SM.3rd.SG-like-NEG-2<sup>nd</sup>.sg.obj

b) I told Larry that Mike does not like X.

Inje ne-eg-e Lari Maik a-mang-ut-om  
PRN.1<sup>st</sup>.SG SM.1st.SG-tell-PFV Larry Mike SM.3rd.SG-like-NEG-1<sup>st</sup>.SG.OBJ

You told Larry that Mike does not like X.

Au nu-og-e Lari Maik a-mang-ut-i  
PRN.2<sup>nd</sup>.SG SM.2nd.SG-tell-PFV Larry Mike SM.3rd.SG-like-NEG-2<sup>nd</sup>.SG.OBJ

c) I told Larry that X does not like Mike.

Inje ne-eg-e Lari i-mang-ut Maik  
PRN.1<sup>st</sup>.SG SM.1st.SG-tell-PFV Larry SM.1st.SG-like-NEG Mike

You told Larry that X does not like Mike.

Au nu-og-e Lari u-mang-ut Maik  
PRN.2<sup>nd</sup>.SG SM.2nd.SG-tell-PFV Larry SM.2nd.SG-like-NEG Mike

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). For example, in English, (D14d) would be "Ozzie told *Harriet* that Bill dislikes *them*," where them would be Ozzie and Harriet.

D14a) Ozzie talked about Harriet to X.

Ozi na-lob-e Harriet m-olil

b) Ozzie talked about X to Harriet.

Ozil na-lob-e m-olil Harriet

c) Ozzie told Harriet that X should leave.

Ozil na-ag-e Hariet gu-jow

d) Ozzie told Harriet that Bill dislikes X.

Ozil na-ag-e Hariet Bil a-mang-ut-il

e) Ozzie said that Harriet thinks that Bill dislikes X.

Ozi na-ag-e Hariet na-jog-e buox Bil a-mang-ut-il

4.4.2.4 Discourse antecedents - Sometimes, LDA strategies do not have to have antecedents in the same sentence if the discourse connections between sentences is strong. Please translate the following scenarios using only the acceptable strategies that permit the corresponding English pronouns all to refer to Mark (English allows only the independent pronoun strategy). Then give please tell us which strategies do not work, providing a translation and gloss, if it is significantly different from your acceptable translations of (D15) and (D16) (save time by setting aside cases where a given strategy could not ever work in the relevant grammatical position, e.g., English *himself* can never be the subject of a tensed sentence). Suppose that in the following scenarios we are being told what was going on in Mark's mind.

D15) Mark feared that his son was not safe. He was ashamed that he could not protect his closest relative. What would his people <sup>27</sup>think of him?

Maruk na-xoll-e buox a-pur-ol a-let ni ga-ssumay.  
Mark SM.3rd.SG-fear-PFV COMP C1-boy-3<sup>rd</sup>.SG.POSS SM.3rd.SG-NEG.be PREP C9-  
peace

(Açila) na-ssu-e min a-ju-ut me á-gadden  
PRN.3<sup>rd</sup>.SG SM.3rd.SG-shame-PFV COMP SM.3rd.SG-able-PFV MOOD SM.3rd.SG-  
protect

an-ol a-fang me n' a-lof-ol.  
C1.person-3<sup>rd</sup>.SG.POSS SM.3rd.SG-more MOOD CONJ SM.3rd.SG-close-3<sup>rd</sup>.SG.OBJ

Wa bug-an-ol gu-ja-e e-jog-ol?  
what C2-person-3<sup>rd</sup>.SG.POSS SM.3rd.PL-go-PFV C3-hold-3<sup>rd</sup>.SG.OBJ

D16) Mark was shocked to see his picture in the paper. All of his supporters would abandon him. How would he tell his mother?

Maruk fi-iñ-ol fi-tit-tiñ  
Mark C6-liver-3<sup>rd</sup>.SG.POSS PRN.3<sup>rd</sup>.SG-RED-hurt

no na-jux me e-foto-ol ni ga-surunal gagu.  
when SM.3rd.SG-see MOOD C3-picture-3<sup>rd</sup>.SG.POSS PREP C9-paper C9.DEF

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<sup>27</sup> 'cousins' replaced by 'people'

U-rikkena-ol                    pan gu-xan-ol.  
C8-supporter-3<sup>rd</sup>.SG.POSS FUT SM.3rd.PL-leave-3<sup>rd</sup>.SG.OBJ

Bu na-ja-e                    bii e-lob ja-ol.  
how SM.3rd.SG-go-PFV COMP C3-tell mother-3<sup>rd</sup>.SG.POSS

Independent and bound pronouns are the only strategies that would work in (D15) and (D16). As has been demonstrated earlier, in Eegimaa anaphors do not occur in subject position. Although they occur in the same position as the object suffix *-ol*, their use of any of the examples above result in ungrammaticality, as shown in (D15b) and (D16b) below.

D15b) Mark feared that his son was not safe. He was ashamed that he could not protect his closest relative. What would his people think of him?

Maruk na-xoll-e                    buox a-pur-ol                    a-let                    ni ga-ssumay.  
Mark SM.3rd.SG-fear-PFV COMP C1-boy-3<sup>rd</sup>.SG.POSS SM.3rd.SG-NEG.be PREP C9-  
peace

(Açila)                    na-ssu-e                    min a-ju-ut me                    á-gadden  
PRN.3<sup>rd</sup>.SG SM.3rd.SG-shame-PFV COMP SM.3rd.SG-able-PFV MOOD SM.3rd.SG-  
protect

an-ol                    a-fang                    me n' \*a-lof-or.  
C1.person-3<sup>rd</sup>.SG.POSS SM.3rd.SG-more MOOD CONJ SM.3rd.SG-close-RFM

Wa bug-an-ol                    gu-ja-e                    \*e-jog-or?  
what C2-person-3<sup>rd</sup>.SG.POSS SM.3rd.PL-go-PFV C3-hold-RCM

D16b) Mark was shocked to see his picture in the paper. All of his supporters would abandon him. How would he tell his mother?

Maruk fi-iñ-ol                    fi-tit-tiñ  
Mark C6-liver-3<sup>rd</sup>.SG.POSS PRN.3<sup>rd</sup>.SG-RED-hurt

no na-jux me e-foto-ol ni ga-surunal gagu.  
when SM.3rd.SG-see MOOD C3-picture-3<sup>rd</sup>.SG.POSS PREP C9-paper C9.DEF

U-rikkena-ol                    pan \*gu-xan-or.  
C8-supporter-3<sup>rd</sup>.SG.POSS FUT SM.3rd.PL-leave-RCM

Bu na-ja-e                    bii e-lob ja-ol.  
how SM.3rd.SG-go-PFV COMP C3-tell mother-3<sup>rd</sup>.SG.POSS

The following scenario concerns what Morris is reporting to us about Mark, where all of the English pronouns are understood as referring to Mark, not to Morris. Please translate using any

(or every) strategy for coreference with Mark that works (including the independent pronoun strategy). Then give please tell us which strategies do not work, providing a translation and gloss, if it is significantly different from your acceptable translations of (D17). If your language permits null subjects understood as pronouns, don't forget to consider that strategy.

D17) 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.

Moris na-ag-e Maruk let fu-nag-ol.  
Moris SM.3rd.SG-say-PFV Mark be.NEG C6-day-3rd.SG.POSS

Moris na-mindum a-ag-ol e-otor-ol  
Moris SM.3rd.SG-begin SM.3rd.SG-say-3rd.SG.OBJ C3-car-3rd.SG.POSS

e-kkut-i'-kkut.  
PRN.3rd.SG-RED-PASS-steal

Imbi ban na-fu-o na-lu-e e-takisi  
COMP finish SM.3rd.SG-MOOD-RFM SM.3rd.SG-hire-PFV C3-taxi

min e-ngar-ol na-ke bu-rok.  
COMP PRN.3rd.SG-take-3rd.SG.OBJ SM.3rd.SG-go C5-work

Moris na-jog-e buox fi-iñ-ol pan fu-ñum e-tiñ.  
Moris SM.3rd.SG-hold-PFV COMP C3-liver-3rd.SG.POSS fut PRN.3rd.SG-MOOD C3-hurt

The report in (D17) is problematic for Eegimaa speakers, at least those with whom I worked. The issue concerns the pronoun 'he' in the third sentence and the fact that it is referring to Mark. None of the Eegimaa speakers accepted this interpretation. They believed that if 'he' should refer to Mark, then a verb of reporting (*naagoli* 'he told us') should have preceded the verb 'hire' or the word Mark should have been explicitly mentioned. They all believed that the use of *Imbi ban* 'then' and the use of the *na-mindum* 'he began' in the preceding sentence show a logical sequence of actions performs by the same agent who is Moris. I completely agree that in Eegimaa, the third sentence does not sounds right with 'he' referring to Mark.

Now suppose that Mark has recently been in the news and he is the topic of our conversation. Speakers A and B use pronouns to refer to him. Please translate using the strategy or strategies in your language that permit coreference with Mark. Once again, please tell us which strategies do not work, providing a translation and gloss, if it is significantly different from your acceptable translations of (D18).

D18) A: Look, there's Mark!  
U-lluj, Maruk umua  
SM.2nd.SG-look Mark DEM.DIST

B: He is so handsome.

Na-war-o                   fang  
SM.3rd.SG-handsome ADV

A: I would not want to be his wife though. All the women are chasing him.

Bare i-mang-ut           i-ni           aar-ol.  
CONJ SM.1st.SG-like-NEG SM.1st.SG-be C1.woman-3<sup>rd</sup>.SG.POSS

W-aare       wawu   pe gu-tey-e           bu-sol-ol  
C18-woman C18.DEF all SM.3rd.PL-run-PFV C5-back-3<sup>rd</sup>.SG.POSS

B: Also, I think he praises himself too much.

Ni-jojox       pop buox na-sadd-oro-sadd-oro           iki gát.  
SM.1st.SG-hold also COMP SM.3rd.SG-RED-RFM-praise-RFM COMP ADV

RBa) Ni-jojox       pop buox \*na-sadd-o-sadd-o           iki gát.  
SM.1st.SG-hold also COMP SM.3rd.SG-RED-IRF-praise-IRF COMP ADV

b) Ni-jojox       pop buox \*na-sadd-or-sadd-or           iki gát.  
SM.1st.SG-hold also COMP SM.3rd.SG-RED-RFM-praise-RFM COMP ADV

c) Ni-jojox       pop buox \* [na]<sup>1</sup>-sal-[ol]<sup>1</sup>-sal           iki gát.  
SM.1st.SG-hold also COMP SM.3rd.SG-RED-3<sup>rd</sup>.SG.OBJ-praise COMP ADV

d) Ni-jojox       pop buox [na]<sup>1</sup>-sas-sal           \* [açila]<sup>1</sup> iki gát.  
SM.1st.SG-hold also COMP SM.3rd.SG-RED-praise PRN.3<sup>rd</sup>.SG COMP ADV

We have seen that *-o* and *-or* are also morphemes which can express reflexivity. However, in the example above, *-oro* is the only acceptable strategy. The use of either an independent pronoun or bound pronoun also yields ungrammaticality.

In considering your responses to this subsection, are there any generalizations that you think would be of interest to us in understanding the circumstances or nuances of meaning that a given choice of coreference strategy might reflect?

#### 4.4.3 Blocking Effects

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

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. If the only successful strategy permitted here is the independent

pronoun strategy, then please indicate this.

D19a) Larry thinks that John respects X.

Lari na-jog-e buox Jon ná-kkanum-ol.  
Larry SM.3rd.SG-hold-PFV COMP John SM.3rd.SG-respect-3<sup>rd</sup>.SG.OBJ

b) Larry thinks that I respect X.

Lari na-jog-e buox ní-kkanum-ol.  
Larry SM.3rd.SG-hold-PFV COMP SM.1st.SG-respect-3<sup>rd</sup>.SG.OBJ

c) Larry thinks that Mary respects X.

Lari na-jog-e buox Mari ná-kkanum-ol.  
Larry SM.3rd.SG-hold-PFV COMP Mary SM.3rd.SG-respect-3<sup>rd</sup>.SG.OBJ

d) Larry thinks that the boys respect X.

Lari na-jog-e buox ú-pur wawu gú-kkanum-ol.  
Larry SM.3rd.SG-hold-PFV COMP c8-boy c18.def SM.3rd.PL-respect-3<sup>rd</sup>.SG.OBJ

e) The men think that the boys respect X. (X = the men)

W-aine wawu gu-jog-e buox ú-pur wawu gú-kkanum-il.  
c18-man c18.def SM.3rd.PL-hold-PFV COMP c8-boy c18.DEF SM.3rd.PL-respect-  
3<sup>rd</sup>.PL.OBJ

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

D20a) Larry thinks that Bill knows that Dave respects X.

Lari na-jog-e buox Bil na-ffas-e  
Larry SM.3rd.SG-hold-PFV COMP Bil SM.3rd.SG-know-PFV

buox Deiv ná-kkanum-ol.  
COMP Dave SM.3rd.SG-respect-3<sup>rd</sup>.SG.OBJ

b) Larry thinks that I know that Dave respects X.

Lari na-jog-e buox ni-ffas-e  
Larry SM.3rd.SG-hold-PFV COMP SM.1st.SG-know-PFV

buox Deiv ná-kkanum-ol.  
COMP Dave SM.3rd.SG-respect-3<sup>rd</sup>.SG.OBJ

c) Larry thinks that Mary knows that Dave respects X.

Lari na-jog-e buox Mari na-ffas-e  
Larry SM.3rd.SG-hold-PFV COMP Mary SM.3rd.SG-know-PFV

buox Deiv ná-kkanum-ol.  
COMP Dave SM.3rd.SG-respect-3<sup>rd</sup>.SG.OBJ

d) Larry thinks that the boys know that Dave respects X.

Lari na-jog-e buox ú-pur wawu gu-ffas-e

Larry SM.3rd.SG-*hold-PFV* COMP C8-boy C18.DEF SM.3rd.PL-*know-PFV*

buox Deiv ná-kkanum-ol.  
COMP Dave SM.3rd.SG-*respect-3<sup>rd</sup>.SG.OBJ*

e) The men think that the boys know that Dave respects. (the men = X)

W-aine wawu gu-jog-e buox ú-pur wawu gu-ffas-e  
C18-man C18.def SM.3rd.PL-*hold-PFV* COMP C8-boy C18.DEF SM.3rd.PL-*know-PFV*  
COMP

buox Deiv ná-kkanum-il  
COMP Dave SM.3rd.SG-*respect-3<sup>rd</sup>.SG.OBJ*

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. Once again, if all of these examples are only acceptable with the independent pronoun strategy, then just say so and provide translations.

D21a) Walter thinks that Bill told Harry that Dave respects X.

Walter na-jog-e buox Bil na-ag-e Hari  
Walter SM.3rd.PL-*hold-PFV* COMP Bill SM.3rd.SG-*say-PFV* Harry

Deiv ná-kkanum-ol.  
Dave SM.3rd.SG-*respect-3<sup>rd</sup>.SG.OBJ*

b) Walter thinks that Bill told me that Dave respects X.

Walter na-jog-e buox Bil na-ag-om  
Walter SM.3rd.PL-*hold-PFV* COMP Bill SM.3rd.SG-*say-1<sup>st</sup>.SG.OBJ*

Deiv ná-kkanum-ol.  
Dave SM.3rd.SG-*respect-3<sup>rd</sup>.SG.OBJ*

c) Walter told me that Dave respects X.

Walter na-ag-om Deiv ná-kkanum-ol.  
Walter SM.3rd.SG-*say-1<sup>st</sup>.SG.OBJ* Dave SM.3rd.SG-*respect-3<sup>rd</sup>.SG.OBJ*

d) Walter said that Dave gave me a book about X.

Walter na-ag-e Deiv na-sen-om e-llibur  
Walter SM.3rd.PL-*hold-PFV* Dave SM.3rd.SG-*give-1<sup>st</sup>.SG.OBJ* C3-book

yo gu-binda-e ni o  
C17.REL SM.3rd.PL-*write-PFV* PREP PRN.3<sup>rd</sup>.SG



d2) Walter said that Dave gave me a book about X.

Walter na-ag-e                      Deiv na-sen-om                      e-l-libur  
Walter SM.3rd.PL-hold-PFV Dave SM.3rd.SG-give-1<sup>st</sup>.SG.OBJ C3-book

yo            gu-binda-\*[o]  
C17.REL SM.3rd.PL-write-3<sup>rd</sup>.SG.OBJ

In (d2), the ungrammaticality stands from the fact that the use of *-ol* here suggests that the book was written for him instead of the book write having been written about him. Only *o* and *açila* can be used here. All the other strategies would not rendered the intended meaning since they would have, at best, *bugo* ‘they’ as antecedent instead of Walter, or the outcome would not make any sense at all.

d3a) Walter said that Dave gave me a book about X.

Walter na-ag-e                      Deiv na-sen-om                      e-l-libur  
Walter SM.3rd.PL-hold-PFV Dave SM.3rd.SG-give-1<sup>st</sup>.SG.OBJ C3-book

yo            gu-binda-or-e  
C17.REL SM.3rd.PL-write-ASS-PFV

(Walter said that Dave gave me a book they wrote)

This sentence suggests that they wrote the book together (associative reading)

d3b) Walter said that Dave gave me a book about X.

Walter na-ag-e                      Deiv na-sen-om                      e-l-libur  
Walter SM.3rd.PL-hold-PFV Dave SM.3rd.SG-give-1<sup>st</sup>.SG.OBJ C3-book

yo            gu-binda-oro-e  
C17.REL SM.3rd.PL-write-RFM-PFV

(Walter said that Dave gave me a book they wrote themselves)

This sentence has two readings: (1) they wrote the book themselves with no help from anybody else or (2) they wrote a book about themselves.

d3c) Walter said that Dave gave me a book about X.

Walter na-ag-e                      Deiv na-sen-om                      e-l-libur  
Walter SM.3rd.PL-hold-PFV Dave SM.3rd.SG-give-1<sup>st</sup>.SG.OBJ C3-book

yo            gu-binda-\*[o]  
C17.REL SM.3rd.PL-write-RFM

The sentence in (d3c) is completely ungrammatical. It’s not because it does not convey the intended meaning, it’s just completely ill-formed and the ungrammaticality is caused by the use of the reflexive marker *-o*.

#### 4.4.4 Islands

Do syntactic islands affect the acceptability of the current strategy? For all the examples in this section, Ira = X. As in 4.3, if the independent pronoun strategy is all that works, please say so, translate, and move on, but if more than one strategy works, please let us know which ones do. Also, if your language permits more than one type of pronoun, be sure to test both kinds (including null arguments interpreted pronominally).

D22a) Ira resents the fact that Mary hates X.

Ira<sup>1</sup> a-mang-ut                  min    Mary a-lal-[ol]<sup>1</sup>                                  me  
Ira SM.3rd.SG-like-NEG COMP Mary SM.3rd.SG-hate-3<sup>rd</sup>.SG.OBJ MOOD

b) Ira respects the man who likes X.

Ira<sup>1</sup> ná-kkanum-e                  á-ine    ahu    a-mang-[ol]<sup>1</sup>                                  me  
Ira SM.3rd.SG-respect-PFV C1-man C1.DEF C1.REL-like-3<sup>rd</sup>.SG.OBJ MOOD

c) Ira says that the man who likes X is intelligent.

Ira<sup>1</sup> na-ag-e                  á-ine    ahu    a-mang-[ol]<sup>1</sup>                                  me  
Ira SM.3rd.SG-say-PFV C1-man C1.DEF C1.REL-like-3<sup>rd</sup>.SG.OBJ MOOD

na-jag-e  
SM.3rd.SG-smart-PFV

d) Ira asked whether Bill saw X.

Ira<sup>1</sup> na-roren-e                  ter        Bil na-jug-[ol]<sup>1</sup>  
Ira SM.3rd.SG-ask-PFV whether Bill SM.3rd.SG-see-3<sup>rd</sup>.SG.OBJ

e) Ira asked when Bill saw X.

Ira<sup>1</sup> na-roren-e                  no        Bil a-jug-[ol]<sup>1</sup>  
Ira SM.3rd.SG-ask-PFV when Bill SM.3rd.SG-see-3<sup>rd</sup>.SG.OBJ

f) Ira did not realize that George followed X.

Ira<sup>1</sup> a-tallo-ut                  buox    Sorus    na-lan-[ol]<sup>1</sup>  
Ira SM.3rd.SG-realize-NEG COMP George SM.3rd.SG-follow-3<sup>rd</sup>.SG.OBJ

g) Ira said that Mary was pretty and that she would marry X.

Ira<sup>1</sup> na-ag-e                  Mari<sup>2</sup> na-war-o                                  ban pan [ø]<sup>1</sup> a-yab-[ol]<sup>2</sup>  
Ira SM.3rd.SG-say-PFV Mary SM.3rd.SG-pretty-RFM CONJ FUT ø SM.3rd.SG-marry-3<sup>rd</sup>.SG.OBJ

In all the cases in (D22), the use of pronouns is the only acceptable strategy. Please note that in (D22g), the object pronoun *-ol* can only refer to Mary since in Eegimaa, the verb ‘marry’ is said differently depending on the gender of the person who is marrying. If the person is a man then the verb is *ejab* which is an active verb which literally means ‘take’. If the person is a woman, the verb is *éjabo* ‘let oneself taken’.

#### 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 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.

In Eegimaa the two mothers would be referred to as *ja-ol* (mother-3<sup>rd</sup>.SG.POSS), with no morphological distinction.

However, other languages have such a morphological distinction (often it is like the logophoric distinction, discussed above, but not always). For example, Adésolá (2004) reports that Yoruba permits a non-logophoric pronoun (a weak pronoun) to be coconstrued with the matrix subject, but the logophoric marked one (the strong pronoun) is still distinguished insofar as it must be *de se*. The verb meaning 'believe' selects for the logophoric complementizer *pé* and the pronouns are distinguished as weak (w) and strong (s).

D24a) Olú gbàgbó pé ilé rẹ̀ ti wó.

Olu believe that house he(w) ASP fall

b) Olú gbàgbó pé ilé òun ti wó.

Olu believe that house he(s) ASP fall

Both: "Olu believes that his house has collapsed."

As Adésolá remarks, "...a strong pronoun [*òun*] is used when self-reference is intended by the reported speaker (or believer) [15b], while a weak pronoun [*rẹ̀*] is used when the reported speaker (or believer) does not know that he was in fact referring to his own house [15a]." The

weak pronoun does not have to refer to Olu, but the strong one must.

If there is such a distinction in your language, then translate the examples indicating the difference in pronouns and we will ask you more about it after we get the questionnaire responses. If you don't understand what is asked for in this section, skip it or ask for assistance.

Earlier in this questionnaire, I discussed the difference between the anaphoric forms in Eegimaa. However, these anaphoric forms would not be used in the examples in (D23) and Eegimaa does not make such a distinction as shown in Yoruba.

## **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.?

In the light of what have been observed throughout the questionnaire, it is pretty safe to claim that in Eegimaa, the *oro-seft* is the strongest reflexive strategy and is very productive. We have also seen that *o-self* is restricted to a set of verbs most of which are verbs of grooming. It is also very clear that in Eegimaa, the idea of reciprocity is conveyed through the morpheme *-or*. However, we must be very careful not to interpret every occurrence of *-or* as an expression of reciprocity. We have seen throughout this questionnaire that *-or* also expresses reflexivity as well as associativity. Eegimaa anaphoric forms also provide support to the idea that anaphors refer to something in the clause where they occur.

[[Á-pur ahu]<sup>1</sup> [a-ttog-o]<sup>2</sup> me n-ga-uw-o<sup>2</sup>] na-ssim-o<sup>1</sup>-e]  
C1-boy C1.DEF C1.REL-find-3<sup>rd</sup>.SG.OBJ MOOD CONJ-C9-bathe-RFM SM.3<sup>rd</sup>.SG-dress-  
RFM-PFV

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.