

**Anaphora in the African Languages - Questionnaire**  
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**PART 2 An inventory of reflexive and reciprocal strategies**

**2.1 Coreference in a single clause**

**2.1.1 "Primary" reflexive strategy -**

A1) John saw himself.

Joni akiwene

Joni a-ka-i-on-ile

Joni SM.c1-PST-RFM-see-PFV

‘John saw himself’

Comment: The root -on- ‘see’ changes when it becomes into contact with perfective *-ile* (? Imbrication process). This applies in many cases with PFV *-ile*. Also, the RFM marker *-i* leads to deletion of the preceding vowel of the past tense marker *-ka*.

**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.

A2a) John washes himself.

Joni akwiyofugaga

Joni a-ku-i-ofug-ag-a

Joni SM.c1-PRS-RFM-wash-HAB-fv

‘John washes himself’

Comment: There are not many verbs of this type, but they include the one for thinking which is *kuhotsa* or *kwihotsa*; shave which is *kumoga* or *kwimoga* etc.

**KS:** We will call this the Null Object strategy, and it will be treated as lexically specific. Are semantic differences between *kuhotsa* and *kwihotsa*? Do they both take clausal complements? Please provide full sentence examples.

**LN:** Both *Kuhotsa* and *kwihotsa* mean ‘to think’. The sentences with complements are the following and they both mean the same thing:

A2ai) Juma akuhotsa kuhusu kusoma

Juma a-ku-hots-a kuhusu ku-som-a

Juma SM.c1-PRS-think-fv PREP INF-read-fv

OR

Juma akwihotsa kuhusu kusoma

Juma a-ku-i-hots-a kuhusu ku-som-a

Juma SM.c1-PRS-RFM-think-fv                      PREP INF-read-fv  
“Juma is thinking about studying.”

b) Mary cut herself. [accidentally]

Malia akidumwe  
Malia a-ka-i-dumul-ile  
Malia SM.c1-PST-RFM-cut-PFV  
‘Marry cut herself’

c) John is ashamed of himself.

Joni akwiwonela nyoni  
Joni a-ku-i-on-el-a                                      nyoni  
Joni SM.c1-PRS-RFM-feel-APPL-fv shame  
‘John is ashamed of himself’ (Lit. John is feeling shame)

d) John destroyed himself.

Joni akitetsitse  
Joni a-ka-i-tets-itse  
Joni SM.c1-PST-RFM-hurt/destroy-PFV  
‘John destroyed himself’

e) We hate ourselves.

Tukwivipilaga ihwehwe  
tu-ku-i-vip-il-ag-a                                      i-hwehwe  
SM.c2.2nd-PRS-RFM-hate-APPL-HAB-fv                      c2-us  
‘We hate ourselves’

KS: We will call this the RFM+EP strategy (EP=emphatic pronoun)

f) They praise themselves

vakwisifiya vavene  
va-ku-i-sifi-a                                      va-vene  
SM.c2-PRS-RFM-praise-fv      c2-them  
‘They praise themselves’

Comment: When the subject marker is plural, the same construction encodes also reciprocal meaning. To encode reflexive meaning only, the emphatic reflexives are used as disambiguators. The emphatic reflexives are formed differently depending on the type of person pronoun as shown here: *yi-nene* ‘myself’, *i-hwehwe* ‘ourselves’, *yi-veve* ‘yourself’, *yi-nyenye* ‘yourselves’ *yi-mwene* ‘himself/herself’, *va-vene* ‘themselves’. Regular pronouns lack the prefix, i.e., in all these emphatic pronouns, the second morpheme is the personal pronoun without the meaning ‘self’. When the reading is reciprocal, the EP is optional but the reading is ambiguous. EPs are never obligatory when co-occurring with the RFM. EPs can also be emphatic subjects when no RFM is present, as in *Juma yimwene* ‘Juma himself’.

KS: To be clear, you mean they have to be attached to the subject when no RFM is present, as in

your example, or will it suffice for there to be no RFM in (Af) (thought I understood that (Af) without the RFM would either be \* or simply lack a reflexive reading, i.e., *Joni akasifiye vavene* where *vavene* refers emphatically to some plurality of persons in the discourse). Please confirm (and correct my example if I have muffed the morphology).

LN: The Sentence *Joni akasifiye vavene* means *John praised them* (*emphatic*)

#### 2.1.4 Obliques and other argument types –

A3a) John spoke to Mary.

Joni akaloongine na Maria		
Joni a-ka-loong-an-ile	na	Maria
Joni SM.c1-PST-speak-RCM-PFV	PREP	Mary
‘John spoke to Mary’		

KS: Two questions – first, does this mean something more like ‘John spoke with Mary’ or even ‘John and Mary spoke to each other’?

LN: The sentence has both interpretations i.e. John spoke with Mary and John and Mary spoke to each other (? Discontinuous reciprocal constructions). The RCM *-an* is found with very few verbs which encode inherent reciprocal situations (cf. Kemmer 1993). It is found in Kihehe with the verbs such as speak, divide (*gava*) > (to) share (*((ku)gavana)*), to meet (*kwitaang’ana*). The RCM *-an* is not productive and I regard the examples where *-an* is used to be the remnants of the RCM *-an* which might have been very productive in the early history of the language.

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

Joni akalonzile kuhusu yimwene		
Joni a-ka-long-ile	about	yi-mwene
Joni SM.c1-PST-speak-PFV	PREP	c1-him
‘John spoke about himself’		

Comment: To achieve the reflexive reading, there is no RFM corresponding to the pronominal form in the PP. To mean ‘John spoke about him/her, where him/her is someone else, you have to take away the *yi-* prefix and remain with *mwene*, but this is not the usual way of saying that. We usually add the OM.c1 *mu-* without the emphatic pronoun as in *John akamulonzile* ‘John spoke about him or her’.

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

Joni akamulonje Maria kuhusu yimwene		
Joni a-ka-mu-long-ile	Maria kuhusu	yi-mwene
Joni SM.c1-TM-OM.c1-speak-PFV	Maria PREP	c1-him
‘John told Mary about himself’		

Comment: The OM is obligatory and it is associated with Maria. *yi-mwene* is associated with Joni. It also possible to say

c’) <i>Joni akilonzile</i>	<i>yimwene</i>	<i>kwa</i>	<i>Maria</i>
Joni a-ka-yi-long-ile	c1-him	to	Mary
John SM.c1-TM-RFM-speak-PFV			
‘John spoke about himself to Mary’.			

Comment: If the OM is dropped, the EP also cannot appear with *i-*; it has to be *Bill akalonje*

*hwehwe* meaning ‘Bill told us.’ The preposition must also be dropped because the construction *Bill akalonje kuhusu hwehwe* is not acceptable. The reflexive reading is not possible if *i-hwehwe* is dropped leaving only the OM because it will mean ‘Bill told us about....’ The question will be about what?

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

Malia akavapelye avana vavene  
 Malia a-ka-va-pel-ile a-va-na va-vene  
 Malia SM.c1-TM-OM.c2-give-PFV aug<sup>1</sup>-c2-child c2-them  
 ‘Mary gave the children themselves’

Comment: This sentence cannot have a reciprocal reading.

KS: I was not clear about the answer to (my confusing) question, namely, which of the two objects is the OM associated with? Clearly, it is coreferent with both of them, but if the sentence were not reflexive (e.g., suppose we had *mwene* in place of *va-vene*), would the OM.c2 still be ok associated *avana*?

LN: Yes, the OM.c2 will still be associated with *avana*.

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

Malia akakiwene ikitabu kunyuma kwakwe  
 Malia a-ka-ki-on-ile i-ki-tabu ku-nyuma ku-akwe  
 Malia SM.c1-PST-OM.c7-see-PFV aug-c7-book LOC-behind LOC-POSS  
 ‘Mary saw a book behind her’

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

Joni akigulye ikitabu  
 Joni a-ka-i-gul-il-ile i-ki-tabu  
 Joni SM.c1-PST-RFM-buy-APPL-PFV aug-c7-book  
 ‘John bought the book for himself’

Comment: With oblique objects, the Emphatic reflexive is used without the RFM *i-* being marked. But with benefactive who is also the agent or subject, the RFM *i-* is used with an APPL.

A4a) Etta likes herself.

Etta akwiwendaga  
 Etta a-ku-i-wend-ag-a  
 Etta SM.c1-PRS-RFM-like-HAB-fv  
 ‘Etta likes herself’

b) Etta scares herself.

Etta akwiyogopaga  
 Etta a-ku-i-ogop-ag-a  
 Etta SM.c1-PRS-RFM-scare-HAB-fv  
 ‘Etta scares herself’

c) Etta worries herself.

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<sup>1</sup> This stands for pre-prefix.

Etta akwiyogopaga  
Etta a-ku-i-ogop-ag-a  
Etta SM.c1-PRS-RFM-worry-HAB-fv  
'Etta worries herself'

Comment: The equivalent of 'worry' and 'scare' is the same word *ogopa* in Kihehe

### 2.1.5 Person and number -

A5a) I saw myself.

Ngiwene  
N-ka-i-on-ile  
SM.c1.1<sup>st</sup>-PST-RFM-see-PFV  
'I saw myself'

b) You cut yourself [accidentally].

Ukwidumula  
u-ku-i-dumul-a  
SM.c1.2<sup>nd</sup>-RFM-cut-fv  
'You cut yourself'

c) We will wash ourselves.

Twiyofuga  
Tu-i-ofug-a  
SM.c2.1<sup>st</sup>-wash-fv  
'We will wash ourselves'

Comment: no future marker in Kihehe

d) You must help yourselves.

Lasima mweitangage  
Must mu-i-tang-ag-e  
Must SM.c2.2<sup>nd</sup>-RFM-help-HAB-IMPV  
'You must help yourselves'

### 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?  
NO

A6a) Peter knows himself.

Pita akwikagulaga (yimwene)  
Pita a-ku-i-kagul-ag-a (yi-mwene)  
Peter SM.c1-PRS-RFM-know-HAB-fv c1-him  
'Peter knows himself'

b) Peter (habitually) criticizes himself.

Pita akwikosolaga (yimwene)  
Pita a-ku-i-kosol-ag-a (yi-mwene)

Peter SM.c1-PRS-RFM-criticize-HAB-fv c1-him  
'Peter criticizes himself'

c) Peter is likely to praise himself.

Pita ahwana kwisifila (yimwene)

Pita a-hwan-a ku-i-sif-il-a (yi-mwene)

Peter SM.c1-able/likely-fv INF-RFM-praise-APPL-fv c1-him

'Peter is likely to praise himself'

Comment: It is not possible for the RFM to appear on *-hwan-* rather than on *-sif-*. It is only possible in *kwiwana* which means 'to resemble or to look similar'.

KS: Please provide sentences with *kwiwana*.

LN: The sentence is:

d. Juma na Joni vihwana

Juma na Joni va-i-hwan-a

Juma Conj John SM.c2-RFM-look similar-fv

'Juma and John resemble or look alike'

(b) Do quantificational constructions involve a separate strategy? NO

A7a) Every boy looked at himself.

Kila mkwamitsi akilafila (yimwene)

Kila mu-kwamitsi a-ka-i-lav-ile (yi-mwene)

Every c1-boy SM.c1-PST-RFM-look-PFV c1-him

b) All the women described John to themselves.

Avamama mbevali vakamwelese Joni kwa vavene

a-va-mama mbevali va-ka-mu-eles-ile Joni kwa va-vene

aug-c2-woman all SM.c2-PST-OM.c1-describe-PFV Joni PREP c2-them

'All the women described John to themselves'

Comment: Kihehe allows only one object in the verb template. Moreover, OM and RFM cannot co-occur?

bi) Avamama vakamtumie (object noun)

A-va-mama va-ka-m-tum-ile

aug-c2-woman SM.c2-PST-OM.c1-send-PFV

'The women sent it to him'

bii) Avamama vakitumye (object noun) vavene

a-va-mama va-ka-i-tum-ile

aug-c2-woman SM.c2-PST-RFM-send-PFV

'The women sent it to themselves'.

biii) \*Avamama vakivatumye

a-va-mama va-ka-i-tum-ile

aug-c2-woman SM.c2-PST-RFM-send-PFV

'The women sent it themselves'.

I need a clarification here. Where is the object noun in (bi) and (bii)? Could you put one in that is not a clitic? Also is (biii) bad because of the translation or because an argument is missing? I think the (bad) sentence I want here has *va-ka-m-i-tum-ile* which shows OM and RFM cannot co-occur.

c) Every teacher introduced himself to Bob.

Kila mwalimu akitambulishwa kwa Bob

Kila mu-alimu a-ka-i-tambul-ish-ile kwa Bob

Every c1-teacher SM.c1-PST-RFM-know-CAUS-PFV PREP Bob

‘Every teacher introduced himself to Bob’ (It reads like ‘Every teacher made himself known to Bob’)

Comment: *-tambul-* is a free-standing verb when it has no CAUS affix; *tambula* means ‘know/identify’ or ‘call’.

d) Some children only help themselves.

Avana vangi vakwitangaga vavene swe

a-va-na va-ngi va-ku-i-tang-ag-a va-vene swe

aug-c2-child c2-some SM.c2-PRS-RFM-help-HAB-fv c2-them only

‘Some children only help themselves’

Comment: The pronoun is necessary for disambiguation from reciprocal reading, not because *swe* is present.

Comment: Kihehe has no grammaticalized honorifics.

A8) Vakiwene

Va-ka-i-on-ile

SM.c2-PST-RFM-see-PFV

‘They saw themselves or each other’

(d) Experiment with placing both corefering arguments in various types of subordinate clauses, as your language allows. For example, consider tensed complements, subjunctives, infinitivals, purpose clauses, or any other embedding construction your language provides.

A9a) Sol says that Alice loves herself.

Sol akutigilaga hela Alisi akwiwendaga

Sol a-ku-tigil-ag-a hela Alisi a-ku-i-wend-ag-a

Sol SM.c1-PRS-say-HAB-fv that Alice SM.c1-PRS-RFM-love-HAB-fv

‘Sol says that Alice loves herself’

b) Sol required that Alice praise herself.

Sol akadagige hela Alisi isifiye

Sol a-ka-dag-ige hela Alisi i-sifi-e

Sol SM.c1-PST-require-PFV that Alice RFM-praise-IMP

‘Sol required that Alice praise herself’

c) Sol thought Alice should praise herself.

Sol akahotse Alisi isifiye

Sol a-ka-hots-e Alisi a-i-sifi-e

Sol SM.c1-PST-think-PFV Alice SM.c1-RFM-praise-SUBJ

- ‘Sol thought Alice should praise herself’
- d) Sol asked Alice to praise herself.  
Sol akawutsitse Alisi isifiye  
Sol a-ka-wuts-e Alice a-i-sifi-e  
Sol SM.c1-ask-PFV Alice SM.c1-RFM-praise-SUBJ  
‘Sol asked Alice to praise herself.’
- e) Sol wants to praise himself.  
Sol akudaga kisifiya  
Sol a-ku-da-ag-a ku-i-sifi-a  
Sol SM.c1-PRS-want-HAB-fv INF-RFM-praise-fv  
‘Sol wants to praise himself.’
- f) Sol expects Alice to praise herself.  
Sol akutegemelaga Alisi kwisifiya  
Sol a-ku-tegemel-ag-a Alice ku-i-sifi-a  
Sol SM.c1-PRS-expect-HAB-fv Alice INF-RFM-praise-fv  
‘Sol expects Alice to praise herself.’
- g) Sol heard Alice praising herself.  
Sol akapulike Alisi akwisifiya  
Sol a-ka-pulik-e Alice a-ku-i-sifi-a  
Sol SM.c1-PST-hear-PFV Alice SM.c1-PRS-RFM-praise-fv  
‘Sol heard Alice praising herself.’

## 2.2 Ordinary (potentially independent) pronouns

A10a) I spoke with Abraham yesterday. He saw Lela.

Ngaloongine na Ablhamu igolo. (Mwene) akamuwene Lela  
N-ka-loong-an-ile na Abraham i-golo. Mw-ene  
1sg-PST-talk-RCM-PFV PREP Abraham aug-yesterday c.1-him  
a-ka-mu-on-ile Lela  
SM.c1-PST-OM.c1-see-PFV Lela  
‘I spoke with Abraham yesterday. He saw Lela.’

Comment: The pronoun is optional. They are rarely used in these constructions just for emphasis due to the fact that Kihehe uses the agreement markers as pronouns.

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

Abraham alikwiya? Ngamuwene (mwene) kulisoko  
Ablhamu ali kwiya? N-ka-mu-on-ile mwene ku-li-soko  
Abraham AUX where? SM.c1-PST-OM.c1-see-PFV him LOC-c5-market  
‘Where is Abraham? I saw him in the market.’

Comment: The pronoun is optional. They are rarely used in these constructions just for emphasis due to the fact that Kihehe uses the agreement markers as pronouns.

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

Tukakuwene (veve). Ukatuwene (hwehwe)?  
Tu-ka-ku-on-ile veve U-ka-tu-on-ile hwehwe?  
SM.c2-PST-OM.c2-see-PFV you SM.c1-PST-OM.c2-see-PFV us  
‘We saw you. Did you see me/us?’



Comment: The pronoun is optional. They are rarely used in these constructions just for emphasis due to the fact that Kihehe uses the agreement markers as pronouns.

### 2.3 Null subject examples.

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

Akalye samaki  
a-ka-l-ile                                 samaki  
SM.c1-PST-eat-PFV                         fish  
'S/he ate fish'

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

Hal akamgongite  
Hal a-ka-mu-gong-ite  
Hal SM.c1-PST-OM.c1-hit-PFV  
'Hal hit him/her'

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

Hal akaloongine na mwene  
Hal a-ka-loong-ine     na     mu-ene  
Hal SM.c1-PST-talk-PFV     PREP   c1-him  
'Hal talked to him/her'

KS: Here you break down *mwene* as c1-him. Why here and not elsewhere? Does *-ene* ever appear independently (e.g., is it similarly a subpart of *vene*)?

LN: Actually yes, that *-ene* is the stem for pronouns and it takes different classes of nouns depending on what what it is intended to mean. We have *mwene* (sg) vs *vene* (plural). For *vene*, I think there is a phonological process that takes away *a*. That means, in its underlying representation it should be *va-ene*. I am not sure whether or not to include this level of detail, depending on whether pronouns in other noun classes are based on an *-ene-* root for 3<sup>rd</sup> person. What do you think? I may include them depending on what you suggest and the goal of this questionnaire.

KS: I am inclined to re-gloss all the pronouns, including those in EPs, as cX-*ene*, where X is the class number, e.g. an EP would be cX-cX-*ene*. I think this would be of interest to morphologists who may be less interested in anaphora, but may want to use our data for some other purpose. Please use the full breakdown from now on. I can have somebody regloss the examples you have already provided, so don't bother about that, unless there is some morphophonological issue that requires comment.

LN: You are right. We can regloss them after finishing our questionnaire.

KS: OK, now is the time! Do it in the future for all subsequent examples – fact I see that you already have in part 3. I will arrange for someone (probably me) to fix the ones in the first two parts.

### 2.2.4 The use of otherwise independent pronouns for clausemate anaphora – potential Condition B effects.

A10g) Ali praised him

Ali akamusifye  
Ali a-ka-mu-sifi-ile

Ali SM.c1-PST-OM.c1-praise-PFV  
'Ali praised him'

Comment: No reflexive meaning.

h) Ali liked him

Ali akamuwendite  
Ali a-ka-mu-wend-ite  
Ali SM.c1-PST-OM.c1-like-PFV  
'Ali liked him'

Comment: No reflexive meaning.

i) Ali saw him

Ali akamuwene  
Ali a-ka-mu-on-ile  
Ali SM.c1-PST-OM.c1-see-PFV  
'Ali saw him'

Comment: No reflexive meaning.

j) Ali talked to him

Ali aloongine nave  
Ali a-ka-loong-ine na mu-ene  
Ali SM.c1-PST-talk-PFV PREP c1-him  
'Ali talked to him'

Comment: No reflexive meaning.

k) Ali sent a book to him

Ali akamtumye ikitabu  
Ali a-ka-mu-tum-il-ile i-ki-tabu  
Ali SM.c1-PST-OM.c1-send-APPL-PFV aug-c7-book  
'Ali sent a book to him'

Comment: No reflexive meaning.

l) Ali helped him

Ali akamtanzile  
Ali a-ka-mu-tang-ile  
Ali SM.c1-PST-OM.c1-help-PFV  
'Ali helped him'

Comment: No reflexive meaning.

m) Ali surprised him

Ali akamshitwe  
Ali a-ka-mu-shitul-ile  
Ali SM.c1-PST-OM.c1-surprise-PFV  
'Ali surprised him'

Comment: No reflexive meaning.

n) Ali bought a book for him

Ali akamugulye ikitabu  
Ali a-ka-mu-gul-il-ile i-ki-tabu  
Ali SM.c1-PST-OM.c1-buy-APPL-PFV aug-c7-book  
'Ali bought a book for him'

Comment: No reflexive meaning.

o) Ali read a book about him

Ali akasomite ikitabu kuhusu mwene  
 Ali a-ka-som-ite i-ki-tabu kuhusu mu-ene  
 Ali SM.c1-PST-read-PFV aug-c7-book PREP c1-him  
 ‘Ali read a book about him’

Comment: No reflexive meaning.

p) Ali found a book near him

Ali akakiwene ikitabu kalibu na mwene  
 Ali a-ka-ki-on-ile i-ki-tabu kalibu na mu-ene  
 Ali SM.c1-PST-c7-see-PFV aug-c7-book near PREP c1-him  
 ‘Ali found a book near him’

Comment: No reflexive meaning.

## 2.3 Reciprocal Readings

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.

Avamama vakwiwonaga  
 a-va-mama va-ku-i-won-ag-a  
 aug-c2-woman SM.c2-PRS-RFM-see-HAB-fv  
 ‘The women see each other’

b) The boys washed each other.

avagosi vakiyofwige  
 a-va-gosi va-ka-i-ofug-ile  
 aug-c2-boy SM.c2-PST-RFM-wash-PFV  
 ‘The boys washed each other’

c) The men combed each other's hair.

Avanyidamwa vakichanwe fwili kila munu  
 a-va-nyidamwa va-ka-i-chanul-ile fwili kila mu-nu  
 aug-c2-man SM.c2-PST-RFM-comb-PFV hair each c1-person  
 ‘The men combed each other's hair’

Comment: Here *kila munu* disambiguates for the reciprocal reading, whereas the reflexive reading would have the POSS pronoun, but this *kila munu* as a disambiguator for reciprocal meaning must be after the verb phrase, not before the verb phrase.

d) They argued with each other.

vakibetsitse  
 va-ka-i-bets-itse  
 SM.c2-PST-RFM-argue-PFV  
 ‘They argued with each other’

Comment: This example encodes inherent reciprocal meaning, so, adding *kila munu* after the verb does not make sense and sounds awkward.

e) The boys kicked each other.

avagosi vakitofile



va-ka-tsi-lek-ile                      i-sawadi      pa-wutalo    kwa    kila      mu-nu  
SM.c2-PST-OM.c10-leave-PFV    aug-c10.gift    LOC-front    PREP    each    c1-person  
'They left presents in front of each other'

Comment: The non-anaphoric reading is also possible, as in (c) above.

#### 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.

Tukiwene  
Tu-ka-i-on-ile  
SM.c2-PST-RFM-see-PFV  
'We saw each other'

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

Mwitange  
Mu-i-tang-e  
SM.c2-RFM-help-IMPV  
'You(pl.) must help each other'

c) We will wash ourselves.

Twiyofuga  
Tu-i-ofug-a  
SM.c2-RFM-wash-fv  
'We will wash ourselves'

Comment: KS: For A13a-d, can *kila munu* appear after the RFM-verb, perhaps as a disambiguator for the reciprocal reading?

LN: Definitely! But it must be after the verb. Otherwise, it will encode reflexive meaning. For example, if you say *Kila munu iyofuga* it means that 'Each person will wash himself or herself' in situations where reference is made to more than one person.

d) They always criticize each other.

vakikosolaga  
va-ku-i-kosol-ag-a  
SM.c2-PRS-RFM-criticize-HAB-fv  
'They always criticize each other'

Comment: In Kihehe, the vowel *u* of the present tense marker *ku-* may form a glide or may be deleted when preceding the RFM. Thus, it can be *vakikosola* or *vakwikosola* meaning the same thing. I don't know how to explain this phonologically because the possible phonological rule in that case is glide formation when *u* precedes *i*. Actually, in this construction, if you add *kila munu* at the presence of the RFM the reciprocal meaning will still be there, but emphasized or disambiguating the reciprocal meaning from the reflexive one. If you take away the RFM and remain with *kila munu* it will mean that 'They always criticize every person', not 'each other'.

e) Many boys kicked each other.

vagosi	vongefu	vakipaanite	
va-gosi	v-ongefu	va-ka-i-paan-ite	
c2-boy	c2-many	SM.c2-PST-RFM-kick-PFV	
‘Many boys kicked each other’			

### 2.3.5 Other clause types, and other strategies:

A14a) Sol says that the girls love each other.

Sol akutigilaga hela Avahinza viyeenda

Sol	a-ku-tigil-ag-a	hela	a-va-hinza	va-i-yeend-a
Sol	SM.c1-PRS-say-HAB-fv	that	aug-c2-girl	SM.c2-RFM-love-fv

‘Sol says that girls love each other’

b) Sol required that the girls praise each other.

Sol akadagige hela avahinza vidaye

Sol	a-ka-dag-ige	hela	a-va-hinza	va-i-day-e
Sol	SM.c1-PST-require-PFV	that	aug-c2-girl	SM.c2-RFM-praise-SUBJ

‘Sol required that the girls praise each other’

c) Sol thought the girls should praise each other.

Sol akahotsitse avahinza lasima vidaye

Sol	a-ka-hots-itse	a-va-hinza	va-i-day-e
Sol	SM.c1-PST-think-PFV	aug-c2-girl	SM.c2-RFM-praise-SUBJ

‘Sol thought the girls should praise each other’

d) Sol asked the girls to praise each other.

Sol akasusile avahinza kwidaya

Sol	a-ka-suk-ile	a-va-hinza	ku-i-day-a
Sol	SM.c1-PST-ask-PFV	aug-c2-girl	INF-RFM-praise-fv

‘Sol asked the girls to praise each other’

e) The girls want to praise each other.

avahinza vakudaa kwidaya

a-va-hinza	va-ku-da-a	ku-i-day-a
aug-c2-girl	SM.c2-PRS-want-fv	INF-RFM-praise-fv

‘The girls want to praise each other’

f) Sol expects the girls to praise each other.

Sol akutegemelaga avahinza kwidaya

Sol	a-ku-tegemel-ag-a	a-va-hinza	ku-i-day-a
Sol	SM.c1-PRS-expect-HAB-fv	aug-c2-girl	INF-RFM-praise-fv

‘Sol expects the girls to praise each other’

g) Sol heard the girls praising each other.

Sol akapulike avahinza vakwidaya

Sol	a-ka-pulik-e	a-va-hinza	va-ku-i-day-a
Sol	SM.c1-PST-hear-PFV	aug-c2-girl	SM.c2-PRS-praise-fv

‘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.

Paulo akayatse filatu fyakwe		
Paulo a-ka-yats-e	fi-latu	fi-akwe
Paulo SM.c1-PST-loose-PFV	c8-shoe	c8-POSS
'Paul lost his shoes'		

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

Paulo akanyanywe liwoko lyakwe		
Paulo a-ka-nyanyul-ile	li-oko	li-akwe
Paulo SM.c1-PST-raise-PFV	c5-hand	c5-POSS
'Paul raised his hand'		

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

Paulo akidumwe liwoko lyakwe		
Paulo a-ka-i-dumul-ile	li-oko	li-akwe
Paulo SM.c1-PST-cut-PFV	c5-hand	c5-POSS
'Paul cut his hand'		

Comment: The reflexive is used with the POSS pronoun if it is something that happens to the subject, rather than something he does willfully.

d) Paul examined his hand.

Paulo akichunguse liwoko lyakwe		
Paulo a-ka-i-chungus-e	li-oko	li-akwe
Paulo SM.c1-PST-RFM-examine-PFV	c5-hand	c5-POSS
'Paul examined his hand'		

e) Paul twisted his ankle (or 'stubbed his toe')

Paulo akikinyite ichala chakwe		
Paulo a-ka-i-kiny-ite	i-ch-ala	ch-akwe
Paulo SM.c1-PST-RFM-stubb-PFV	aug-c7-toe	c7-POSS
'Paul stubbed his toe'		

Comment: The reflexive is used with the POSS pronoun if it is something that happens to the subject, rather than something he does willfully.

#### 2.4.2 Reflexives and reciprocals in nominals -

A16) Andrew's self-confidence annoyed Mary.

ukwiyaamina kwa Andlea kukamuvifye Malia		
u-ku-i-aamin-a	kwa Andlea ku-ka-mu-vip-ile	Malia
aug-c15-RFM-confidence-fv	PREP Andrew SM.c15-PST-OM.c1-annoy-PFV	Malia
'The self-confidence of Andrew annoyed Mary'		

A17a) Andrew's introduction of himself impressed the teacher.

ukwitambulisha kwa Andlea kukamunoje umwalimu		
u-ku-i-tambul-ish-a	kwa Andlea ku-ka-mu-nog-ile	
aug-c15-RFM-introduce-CAUS-fv	PREP Andrew SM.c15-PST-OM.c1-impress-PFV	
u-mu-alimu		

aug-c1-teacher

‘The self-introduction of Andrew impressed the teacher’

Comment: The nominal is introduced by the infinitive *ku-* which has been classified in Bantu noun classes to belong to class 15. This *ku-* derives verbs to function as noun phrases (i.e. subjects as in the above sentences).

b) Andrew’s evaluation of himself was too critical.

Ukwisahisha kwa Andlea kwali kwa makini hilo

u-ku-i-sahish-a                      kwa    Andlea                      kwali    kwa    makini                      hilo  
aug-c15-RFM-evaluate-fv    Prep    Andrew                      AUX    Prep    critical                      too

‘The self-evaluation of Andrew was too critical’

Comment: The nominal is introduced by the infinitive *ku-* which has been classified in Bantu noun classes to belong to class 15. This *ku-* derives verbs to function as noun phrases (i.e. subjects as in the above sentences).

c) Their instructions to each other were not clear.

Ukwiyeleza kwao kwa kila munu sikwelewiki ndaa

u-ku-i-eles-a                      ku-ao                      kwa    kila    mu-nu  
aug-c15-RFM-instruct-fv    c15-POSS                      PREP    each    c1-person  
si-ku-elew-ik-i                      ndaa  
NEG-PRS-know-STAT-fv    NEG

‘Their instructions to each other were not clear’

Comment: If the RFM were missing, this nominal would not be acceptable with reciprocal meaning. It is acceptable but it means something else. For example, if we take the 17c without *kila munu* will mean something like ‘The way each one instructed was not clear’.

Comment: The nominal is introduced by the infinitive *ku-* which has been classified in Bantu noun classes to belong to class 15. This *ku-* derives verbs to function as noun phrases (i.e. subjects as in the above sentences).

d) Their evaluations of each other were too generous.

ukwisahisha kwao kila munu kwanukilwe hilo

u-ku-i-sahish-a                      ku-ao                      kwa    kila    mu-unu                      kwali  
aug-c15-RFM-evaluate-fv    c15-POSS                      PREP    each    c1-person                      AUX  
ku-anuk-il-w-e                      hilo  
SM.c15-accept-APPL-PASS-PFV    too/much

‘Their evaluations of each other were too generous’ (Lit. their evaluations were highly accepted)

Comment: If the RFM were missing, this nominal would not be acceptable with reciprocal meaning.

Comment: The nominal is introduced by the infinitive *ku-* which has been classified in Bantu noun classes to belong to class 15. This *ku-* derives verbs to function as noun phrases (i.e. subjects as in the above sentences).



#### 2.4.4 Tentative list of the strategies

**RFM** – The marking of reflexive and reciprocal meaning in Kihehe is marked by the verbal prefix *i-* which is a very productive marker found across all verb classes. This verbal affix that signals only a reflexive meaning when its subject is singular, but it can also be reciprocal when the antecedent is plural. It is productive if the reflexive argument is the DO (or the APPL object, as in benefactive, see A3g). It does not co-occur with a prepositional object and cannot form reflexive or reciprocal readings with the object (AGR-*ene* is needed for that). The RFM must be as local as possible to its antecedent, not in a higher clause (A6c). RFM cannot co-occur with any OM, unless the RFM is lexicalized. There are instances where the RFM induces a middle interpretation.

**Null Object** – lexically restricted and is always(?) reflexive See (A5c).

**Emphatic Pronoun AGR-*ene*** – This form consists of three subparts. The final part is the root – *ene* which is preceded by a noun class marker to form a pronoun of that noun class. The emphatic is formed by adding the outer prefix, i.e., the form of AGR-*ene* is cX-cX-*ene*. AGR-*ene* is not used to form reflexive or reciprocal readings on its own unless it is the object of a preposition (A3b). When it is used without the presence of RFM, it is more typically hosted on a noun, in the manner of English *John himself likes fish*. It can be anteceded by a direct object (e.g., in the form of an OM) and always has a reflexive reading (that is to say, not reciprocal). Sometimes it can form a reflexive reading in DO position if it is focused, but it is normally prohibited from having a local subject antecedent without the intervention of RFM or a preposition. It appears to be able to pick up discourse antecedents. It can have a non-clausemate antecedent, especially in exclusive contexts (“no one but...”).

**RFM+EP** – The EP is always optional but typically is used in plural forms to disambiguate between reciprocal and reflexive readings in favor of reflexive readings of RFM.

**RFM+*kila munu*** – This strategy is used to disambiguate the RFM so as to yield reciprocal readings. *Kila munu* means “each person” when it occurs without the RFM, including in prepositional object position, but in that context, it can also have a reciprocal reading. It only means “each person” in subject or object position.

**RCM** – An invariant verbal extension. This is a lexicalized remnant of the RCM of other Bantu languages. There are some inherently reciprocal verbs that require it. There is a usage of *an* as a sociative affix. **We should test to see if it can co-occur with OM or RFM on the same verb stem.**

**OM** - A basic pronominal strategy in the form of a verb affix. It can co-occur with thematically indistinct nominals. No more than one OM is permitted per verb. It cannot co-occur on a verb stem with the RFM. **There is more to be explored on this.**

**Pronoun** – A free-standing pronoun. It lacks the prefix of the EP and cannot be used to form reflexive readings, even in a PP coargument.

***Kila munu*** – This is a disambiguator in favor of reflexive readings in some contexts, but we need some more precision about those contexts. Its effect is sensitive to its placement in the sentence.

**Independent pronouns** – These have the form *cX-ene*, that is, a noun class prefix followed by the pronoun root. They tend to be used for focus. We have not studied them in detail.

### Part 3 General details about the strategies

#### 3.1 Marking

Comment: The marking of reflexive and reciprocal meaning in Kihehe is marked by the verbal affix (verbal prefix *i-* which is a very productive marker; the suffix *-an* appears with a limited number of verbs encoding inherent reciprocal situation (cf. Kemmer (1993) on prototypical vs inherent reciprocal situations).

#### 3.2 Productivity

3.2.1 How productive is this strategy, with respect to which verbs or predicates allow it?

Comment: The *i*-strategy is extremely productive in encoding reflexive and reciprocal meaning (the reflexive prefix *i-*). Note that the suffix *-an* is less productive and is restricted to a very few predicates.

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: No, it is not lexically restricted to a particular class of verbs. So, it has (almost) no exceptions.

#### 3.3 Context of Use

3.3.1 How marked or natural is this strategy?

Comment: This strategy is natural and it is the way people talk to each other in any context (be it formal or casual).

3.3.2 Is special intonation or emphasis necessary?

Comment: I don't think it has special intonation. I am not sure on this because I have not marked tone. This will be addressed later if we will decide to mark tone.

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.

Kama Marsha akumuwendaga munu yumwi, ngona akiwendaga yimwene.

Kama Marsha a-ku-mu-wend-ag-a mu-nu yumwi, ngona a-ku-i-wend-ag-a

If Marsha SM.c1-PRS-OM.c1-like-HAB-fv c1-person one, then SM.c1-PRS-RFM-like-HAB-fv  
mw-ene

c1-her

b) Marsha thinks I should trust no one but herSELF.

Marsha akuhotsaga ndemwakumwamina munu ndaa ila mwene.

Marsha a-ku-hots-ag-a                      n-lemwa                      ku-mu-amin-a                      mu-nu  
 Marsha SM.c1-PRS-think-HAB-fv      SM.c1.1<sup>st</sup>-should not      INF-OM.c1-trust-fv      c1-person

ndaa    ila      yi-mw-ene  
 Neg    Conj    c1-c1-her  
 ‘Marsha thinks I should trust no one but herself’

Comment: As you can see in these sentences, (a) has RFM followed by the pronoun *mwene*. (b) has the emphatic reflexive pronoun *yimwene*.

### 3.4 Morphology

The RFM does not have an independent lexical translation and it has no agreement features because the reflexive-reciprocal prefix *i-* remains unchanged regardless of whether the antecedent is singular or plural.

**cX-cX-ene. FOR DATA ENTRY: Please ask about where this should be inserted once everything else is entered.**

Here I would like a full paradigm for the pronouns *cX-ene* as well as the *cX-cX-ene* forms for all of the noun classes and persons, perhaps in the form of a chart. I have encountered the *-ene* cognate in many Bantu languages and the similarities and differences are revealing.

NC	cX-ene	cX-cX-ene
1	mw-ene	yi-mw-ene
2	v-ene	va-v-ene
3	gw-ene	gu-gw-ene
4	j-ene	Ji-j-ene
5	ly-ene	li-ly-ene
6	g-ene	ga-g-ene
7	ch-ene	ki-ch-ene
8	fy-ene	fi-fy-ene
9	y-ene	yi-y-ene
10	ts-ene	tsi-ts-ene
11	lw-ene	lu-lw-ene
12	k-ene	ka-k-ene
13	tw-ene	tu-tw-ene
14	u-ene	u-w-ene
15	kw-ene	ku-kw-ene
16	p-ene	pa-p-ene
17	mw-ene	mu-mw-ene
18	gw-ene	gu-gw-ene

Once we have done this, there are a variety of additional tests that we will be exploring with the use of AGR-AGR-ene.

3.5.2 For each morphological feature, what determines its value? (For example, agreement with the antecedent, or agreement, in the case of possessives in some languages, with the possessed N.) In particular, for each agreement feature, indicate whether it must agree with the antecedent, or perhaps with something else, and whether it must do so (a) obligatorily, or (b) usually or optionally.

KS: For this I have in mind the relation to SM agreement for person and noun class (for *cX-cX-ene* when it is in subject position) and the relation of the noun class and person of an antecedent to the *cX-* of pronouns and *AGR-AGR-ene*. The question arises as to whether SV agreement and antecedent agreement are sensitive to the same person and noun class features. In other Bantu languages, the answer is not always ‘yes’. I will add more about this, perhaps for the next elicitation.

LN: The *cX-cX-ene* must agree with the antecedent whether in the subject position or whether it appears after verb (as emphatic reflexive pronoun). For the SV agreement, the SM must agree with the *cX* (cf. the table above).

### 3.6 Interaction with verb morphology - Incompatibilities

#### 3.6.1 Tense, Mood, Aspect.

B3a) Gina (generally) washes herself

Gina akwiyofugaga

Gina a-ku-i-ofug-ag-a

Gina SM.c1-PRS-RFM-wash-fv

‘Gina washes herself’

b) Gina has washed/was washing herself.

Gina iyofwiige

Gina a-i-ofug-ige

Gina SM.c1-RFM-wash-PFV

‘Gina has washed’

c) Gina should wash herself.

Gina iyofuge

Gina a-i-ofug-e

Gina SM.c1-RFM-wash-SUBJ

‘Gina should wash herself’

Comment: In subjunctives, the RFM triggers the change of the final vowel from ‘a’ to ‘e’. The change of the final vowel from ‘a’ to ‘e’ also applies in imperatives when the RFM is marked. For example:

ci) Witange

u-i-tang-e

SM.c1-RFM-help-IMP

‘Help oneself’

3.6.2 Grammatical Function (GF)-changing - Consider GF-changing constructions or operations in your language that affect the argument structure of a verb, adding, promoting, or demoting arguments. For example, passive, antipassive, stative, benefactive, applicative, etc. Sometimes Grammatical-Function Changing ("GF-changing") morphemes, such as passive, inverse, middle, dative alternation, causative, applicative affixes or markers etc. are incompatible with a given coconstrual strategy. In other words, where the result of the GF-change has at least two arguments, check whether the GF-change is compatible with the current strategy. Manipulate the verbs meaning *talk to*, *give*, *visit*, and *kill*.

Most of what is needed for this section you have provided in the next section. or this section. What would be useful, however, is to have sentences with verbs that have more than one of the affixes listed above. For example e.g., a causativized passive or a passivized causative, a passive of an applicative, and if the stative/impositive can co-occur with anything, a sentence with that and another affix too. Then please look at the verbs that take *-an-* inherently and see where that affix goes when one of the other affixes or some combination of them is present (where that is possible). Also please check for the placement of *-an-* among the verb extensions when the meaning of *-an-* is sociative.

#### Causative + Passive

Kulimitswa  
 Ku-lim-its-w-a  
 INF-cultivate-CAUS-PASS-fv  
 To be made (by someone) to cultivate

Comment: I think the passive +causative order is not possible in Kihehe (I have tried to think about it and it is difficult to get even a single example)

#### Applicative + Passive

Kupelelwa munyumba  
 ku-pel-el-w-a                      mu-nyu-mba  
 INF-give-APPL-PASS-fv        c17-c9-house  
 Being given something in the house

#### Applicative + Passive

Kutovelwa munyumba  
 ku-tov-el-w-a                      mu-nyu-mba  
 INF-beat-APPL-PASS-fv        c17-c9-house  
 Being beaten in the house

#### RCM *-an* + Applicative

Kuloonganila munyumba  
 Ku-loong-an-il-a                      mu-nyu-mba  
 INF-talk-RCM-APPL-fv        c17-c9-house  
 To talk to each other in the house

#### Stative + Applicative

Kundiindikila kushoto

ku-diind-ik-il-a                      ku-shoto  
INF-close-ST-APPL-fv              c15-left  
To close leftwards (i.e. the door closes leftward)

Comment. These are the co-occurrences I can think about them for now. Check if they make sense and then if more is needed, I will add what is needed.

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.

#### Applicative

G1a) Juma akwigulila imyenda  
Juma a-ku-i-gul-il-a                      i-mi-enda  
Juma SM.c1-PRS-RFM-buy-APPL-fv      Aug-c3-cloth  
'Juma is buying for himself clothes'

Comment: The RFM strategy is compatible with applicative *-il/-el* and causative (valency increasing verb extensions). i.e.

#### Causative

G1b) Juma akwivakitsa  
Juma a-ku-i-vas-its-a  
Juma SM.c1-PRS-RFM-sleep-CAUS-fv  
'Juma is making himself sleep'

Comment: The RFM strategy is not compatible with passive *-w* and stative *-ik/-ek* (valency reducing verb extensions). i.e.

#### Passive

G1c) Juma akutangwa  
Juma a-ku-tang-w-a  
Juma SM.c1-PRS-help-PASS-fv  
'Juma is being helped'

G1d) \*Juma akwitangwa  
Juma a-ku-i-tang-w-a  
Juma SM.c1-PRS-RFM-help-PASS-fv

KS: How about 'Juma was helped for his own benefit' with an applicative affix and an RFM?

LN: Not possible because the RFM never co-occurs with the PASS.

#### Stative

G1e) Umugunda gukulimika  
u-mu-gunda      gu-ku-lim-ik-a  
Aug-c3-farm      SM.c3-PRS-cultivate-ST-fv  
'The farm is cultivatable'

G1f) \*Umugunda gukwilimika  
u-mu-gunda      gu-ku-i-lim-ik-a  
Aug-c3-farm      SM.c3-PRS-RFM-cultivate-ST-fv

### 3.7 Uses that are not quite coreference

The body of the questionnaire investigates uses of the identified strategies as coreference strategies, meaning that they express coreference or overlap between two logical arguments (or adjuncts) of a clause. Are there other uses of this strategy, in which it does not express coreference between two arguments or adjuncts (e.g., like locatives or directionals)? Many languages use reflexive morphology for purposes not obviously connected to reflexivization. If so, explain and provide a few examples. Some frequent uses of reflexive strategies:

#### 3.7.1 Idiosyncratic or inherent.

Ku-iwuka  
INF-RFM.remember  
'to remember'

Comment: Yes, there are some inherently reflexive verbs. In this example, the RFM *i-* is lexicalized. It has become part of the verb root. For this reason, this verb can occur with an OM, e.g., *ku-mu-iwuka*, 'to remember him/her'

#### 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.

Joni akalye isamaki yimwene  
John a-ka-ly-e i-samaki yi-mw-ene  
John SM.c1-PST-eat-PFV aug-c.9fish c1-c1-him  
'John ate fish himself'

Comment: The reflexive prefix *i-* is not used in these examples. It is the Emphatic reflexives which are used, as shown in Kihehe sentences in B1c) and B1d).

d) John himself ate fish.

Joni yimwene akalye isamaki  
John yi-mwene a-ka-ly-e i-samaki  
John c1-him SM.c1-PST-eat-PFV aug-c9fish  
'John himself ate fish'

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*.)

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

Joni akapigite iki iyena  
Joni iyena a-ka-pig-ite iki  
Joni alone SM.c1-PST-do-PFV this  
'John alone did this'

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

Joni akapigite iki iyena  
Joni a-ka-pig-ite iki iyena  
Joni SM.c1-PST-do-PFV this alone  
'John did this alone'

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

Joni yimwene akapigite iki  
Joni yi-mwene a-ka-pig-ite iki  
John c1-him SM.c1-PST-do-PFV this  
'John himself did this'

B'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)

Joni akapigite iki yimwene  
Joni a-ka-pig-ite iki yi-mw-ene  
John SM.c1-PST-do-PFV this c1-c1-him  
'John himself did this'

### 3.7.3 Middle.

Comment: Yes, the reflexive prefix can be used in middle situations. For example: The following sentence is encoding spontaneous event. So, the reflexive prefix must be used for this sentence to describe an event as happening spontaneously.

Amasoli gikoong'ase  
a-ma-soli ga - i - koongas-e  
Aug-c.6-grass SM.c6-RFM-collect-PFV  
'The grasses have accumulated'

Comment: Decausative use of RFM.

*Amasoli gakwiluunda*  
a-ma-soli ga - ku - i - luund - a  
aug-c6-grass SM.c6-PRS-RFM-put together -fv  
'The grasses are piling up'

Comment: Decausative use of RFM.

Umulyango gukwidiinda  
u-mu-lyango gu-ku-i-diind-a  
aug-c3-door SM.c3-PRS-RFM-close-fv  
The door is closing

Comment: Decausative use of RFM.

3.7.4 Distributive, sociative, etc. Comment: The RCM *-an* can be found in sociative constructions, as shown in the following sentence.



Vawuungana kulima umugunda  
 Va-wuung-an-a                      ku-lim-a              u-mu-gunda  
 SM.c2-connect-RCM-fv      INF-dig-fv      aug-c3-farm  
 ‘They will join together to cultivate the farm’

Comment: Sociative use of RCM.

Vakawuunganiswe kulima umugunda .....  
 Va-ka-wuung-an-is-w-e                      ku-lim-a              u-mu-gunda  
 SM.c2-connect-RCM-CAUS-PASS-perf      INF-dig-fv      aug-c3-farm  
 ‘They were made to join together to cultivate the farm....’

Comment: Sociative use of RCM.

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: N/A

- B5a) Bill did not see X
- b) Does Mary like X?
- c) X went to the bank yesterday.

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)
- b) Many people do not like anchovies, but X likes them.  
 (X = speaker, X = addressee)

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

Comment: N/A

- B7a) I don't like the way he speaks to one.
- b) One cannot be too careful
- c) Bill insults one before one can say a word.

### 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?

Avakulima vakamuwene nani?  
 a-va-kulima                      va-ka-mu-on-ile                      nani?  
 Aug-SM.c2-farmer      SM.c2-PST-OM.c1-see-PFV                      who  
 ‘Who did the farmers see?’

They saw *him*.

Vakamuwene mwene  
 Va-ka-mu-on-ile mw-ene  
 SM.c2-PST-OM.c1-see-PFV c1-him  
 ‘They saw him’

Comment: KS: the context here: 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*.  
 Avakulima sivakamuweni Malia ndaa. Vakamuwene mwene.  
 a-va-kulima si-va-ka-mu-on-ile Mary ndaa. va-ka-mu-on-ile mw-ene  
 aug-c2-farmer Neg-SM.c2-PST-OM.c1-see-PFV Mary Neg. SM.c2-PST-OM.c1-see-PFV c1-him

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.

### 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. The curious property of these examples is that the antecedent is animate, but the reflexive, reciprocal or pronoun corresponds to something inanimate that is a representation of the animate antecedent. Strictly speaking, this is not coreference, since the person and the statue are not the same, yet many languages use pronouns and anaphors to describe these situations.

Feel free to substitute your favorite national author for Grisham.

B8a) Castro admired himself in the wax museum. (himself = statue of Castro)  
 b) Grisham has not read himself in Swahili, though he has read himself in

B8a) Juma iwona mupicha  
 Juma a-i-on-a mu-picha  
 Juma SM.c.1-RFM-see-fv c17-picture  
 ‘Juma will see himself in the picture’

b) Juma siisomiti ndaa mukiswahili  
 Juma si-i-som-it-i ndaa mu-ki-swahili  
 Juma NEG-RFM-read-perf-NEG NEG c17-c7-Swahili  
 ‘Juma has not read himself in Swahili’

Comment: The reflexive prefix i- is still used with the proxy reading in Kihhehe.

Here the antecedent *Castro* is Castro the person, but *himself* is the statue of Castro. *Grisham* is Grisham, the person, but *himself* is Grisham’s writings.

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.  
 Kastro akiyofwige molamola, hambi alemwe kwananga inta ndaa

Kastro a-ka-i-ofug-ile molamola, hambi a-lemw-e ku-anang-a i-nta ndaa  
 Kastro SM.c.1-PST-RFM-wash-perf carefully, so as SM.c1-not-perf INF-damage-  
 fv aug-wax NEG  
 ‘Castro washed himself carefully, so as not to damage the wax’

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

Kastro akiyofwige molamola hambi alemwe kwananga inta ndaa  
 Kastro a-ka-i-ofug-ile molamola hambi a-lemw-e ku-anang-a i-nta ndaa  
 Kastro SM.c.1-PST-RFM-wash-perf carefully so as SM.c.1-not-perf INF-damage-  
 fv aug-wax NEG  
 ‘Castro washed carefully, so as not to damage the wax’

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

Juma akifwisile molamola, hambi alemwe kwananga inta ndaa  
 Juma a-ka-i-fwali-is-ile molamola, hambi a-lemw-e ku-anang-a i-nta  
 ndaa  
 Juma SM.c.1-PST-RFM-wear-CAUS-perf carefully, so as SM.c.1-not-perf INF-  
 damage-fv aug-wax NEG  
 ‘Juma dressed herself carefully, so as not to damage the wax’  
 Comment: The RFM refers to the statue being washed or seen.

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

Juma afwalite molamola, hambi alemwe kwananga inta ndaa  
 Juma akifwisile molamola, hambi alemwe kwananga inta ndaa  
 Juma a-ka-i-fwali-is-ile molamola, hambi a-lemw-e ku-anang-a i-nta  
 ndaa  
 Juma SM.c.1-PST-RFM-wear-CAUS-perf carefully, so as SM.c.1-not-perf INF-  
 damage-fv aug-wax NEG  
 ‘Juma dressed herself carefully, so as not to damage the wax’  
 Comment: The RFM refers to the statue being washed or seen.

e) Castro saw himself in the show, but he didn’t like what he saw.

Kastro akiwene mushoo, ila siawenditi cheakiwene ndaa  
 Kastro a-ka-i-on-ile mu-shoo, ila si-a-wend-iti che-a-ki-on-ile  
 ndaa  
 Kastro SM.c.1-PST-RFM-see-perf c17-show, but NEG-SM.c.1-like-perf REL-SM.c.1-  
 c7-see-perf NEG  
 ‘Castro saw himself in the show, but he didn’t like what he saw’  
 Comment: The RFM refers to the statue being washed or seen.

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

specific reading that Castro washed the statue of him that (B9a) has. For (B9e), imagine a show where an actor is playing the part of Castro and Castro is in the audience watching his counterpart on stage.

Test for proxy readings in your language and see if there are instances where they are possible and others where they are not. Proxy readings do not require locality, so cases like B10a-c are also generally possible.

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

Grimsham akutigilaga akuloongaga Kiswahili wunofu  
 Grimsham a-ku-tigil-ag-a a-ku-loong-ag-a ki-swahili wu-nofu  
 Grimsham SM.c1-PRS-say-HAB-fv SM.c1-PRS-say-HAB-fv c.7-Swahili c.14-better  
 Grimsham says he sounds better in Swahili.

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

Castro akihotse ulwa umwene imunofu  
 Castro a-ka-hots-e ulwa u-mu-ene i-mu-nofu  
 Castro SM.c1-PST-think-perf that aug-c.1-him aug-c.1-good/better  
 Castro thought that he looked handsome.

If you are comfortable with the interpretations as described, then provide morpheme breakdown and gloss (also translation, if you have to adjust the example to make a plausible sentence in Kihehe). If you feel all of this is too contrived for you to form any firm conclusions, then just say so and we will skip this section.

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) Mark Twain and Victor Hugo did not read each other in Berber.

Mark Twain na Victor Hugo sivakisomiti ndaa kusaluni  
 Mark Twain na ViCtor Hugo si-va-ka-i-som-iti ndaa ku-Berber  
 Mark Twain Conj Victor Hugo NEG-SM.c.2-PST-RCM-read-perf NEG c17-  
 Berber

'Mark Twain and Victor Hugo did not read each other in Berber'

b) Marlene and Castro did not see each other in the audience, but they did see each other on the stage/in the show.

Marlene na Castro sivakiweni ndaa muvanu, lakini vakiwene kusteji  
 Marlene na Castro si-va-ka-i-on-ile ndaa mu-va-nu,  
 lakini  
 Marlene Conj Castro NEG-SM.c.2-PST-RCM-see-perf NEG c17-c2-person,

but  
 va-ka-i-on-ile pa-steji  
 SM.c.2-PST-RCM-see-perf c16-steji  
 ‘Marlene and Castro did not see each other in the audience, but they did see each other on the stage’

### 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

Sherman akiwendaga imwene kuliko Bill  
 Sherman a-ku-i-wend-ag-a i-mw-ene kuliko Bill  
 Sherman SM.c1-PRS-RFM-like-HAB-fv c1-c1-him than Bill  
 ‘Sherman likes himself more than Bill’

Comment: KS: To clarify, does this mean ‘Sherman likes himself more than Bill likes Sherman’ or ‘Sherman likes himself more than Bill likes himself’, i.e., Sherman is more of a self-admirer than Bill is? LN: The sentence has either meaning.

b) Sherman likes/praises himself more than Bill does

Sherman akiwendaga imwene kuliko Bill  
 Sherman a-ku-i-wend-ag-a i-mw-ene kuliko Bill  
 Sherman SM.c1-PRS-RFM-like-HAB-fv c1-c1-him than Bill  
 ‘Sherman likes himself more than Bill does’

Comment: I think the same structure is used as in B12a, but it is ambiguous between the two interpretations ‘Sherman likes himself more than Bill likes Sherman’ or ‘Sherman likes himself more than Bill likes himself’, i.e., Sherman is more of a self-admirer than Bill is.

English permits both of these, though I suspect (B12b) may not be as widely available as (B12a). If not, then concentrate on (B12a). The following readings, where the *Italicized* portions are what is missing for (B12a, b) but can be interpreted as if it was there (which is what is meant here by ‘ellipsis’)

i. Sherman likes/praises himself more than *Sherman likes* Bill.

Sherman akiwendaga imwene kuliko Bill  
 Sherman a-ku-i-wend-ag-a i-mw-ene kuliko Bill  
 Sherman SM.c1-PRS-RFM-like-HAB-fv c1-c1-him than Bill  
 ‘Sherman likes himself more than Bill’

ii. Sherman likes/praises himself more than Bill *likes him* (=Sherman).

Sherman akiwendaga imwene kuliko Bill kumuwenda  
 Sherman a-ku-i-wend-ag-a i-mw-ene kuliko Bill ku-mu-wend-a  
 Sherman SM.c1-PRS-RFM-like-HAB-fv c1-c1-him than Bill INF-OM.c1-  
 like-fv  
 ‘Sherman likes himself more than Bill likes him’

iii. Sherman likes/praises himself more than Bill *likes himself*.

Sherman akiwendaga imwene kuliko lwe Bill akiwendaga

Sherman a-ku-i-wend-ag-a i-mw-ene kuliko lwe Bill a-ku-i-wend-ag-a

Sherman SM.c1-PRS-RFM-like-HAB-fv c1-c1-him than how Bill SM.c1-PRS-RFM-like-HAB-fv

‘Sherman likes himself more than Bill likes himself’

Please try to formulate sentences like those in (B12a) (an/or B12b, if that is possible) trying out each of the non-reciprocal strategies in the first clause and determining for each strategy which of the readings i-iii. are possible. If you have several strategies in your language, then we expect you will have many examples as translations of (12a, b) for whatever verb works with the strategy in question. Please adjust the examples to use appropriate verbs for the strategy you are testing, and if there are generalizations about which verbs go with which strategies more successfully, that would be very interesting to know. Remember to try both affixal and argument anaphor strategies, if your language has both.

## PART 4 Exploration of syntactic domains

This section is more exploratory than the preceding ones, and so we rely more on your linguistic expertise and your sense of what we are looking for in the pattern of anaphora in your language. Soliciting examples for all possible combinations of syntactic factors would be a prohibitive task. We present selected combinations of syntactic factors and ask you be on the lookout for any significant interactions between these factors and the strategies they allow, such as distance from the antecedent, type of antecedent, and some details of interpretation. Some of the information asked for here will be redundant with respect to earlier information, but please bear with us, as we are establishing broader paradigms of what is possible for each strategy. Please read these instructions carefully, and return to them if unclear about how to handle a question.

In this section you will be asked to construct a variety of sentence types and test their acceptability. In typical cases, an English sentence will be provided as a guide with one argument marked "X" and the X argument is to be construed as coreferent with some other designated argument (e.g., X = John). When you are asked to provide a reciprocal example, change John to some plural subject of the form John and Bill or the boys or the girls, but do not use other sorts of subjects unless you are instructed to do so (we are avoiding certain kinds of complications that arise with quantified subjects that we will ask about separately below).

To show how we would like you to proceed in this section, we begin with a relatively simple elicitation. Construct a relatively simple transitive sentence, such as John hit Bill, providing gloss and translation. Now use each coreference strategy in your list to change the sentence you constructed into a reflexive. For example, for a sentence like John hit X where X is John, try each strategy and determine whether or not the outcome is successful for a reflexive or reciprocal reading. For English, we might describe four strategies as IMPLICIT, X-SELF, EACH-O and O-another (one another) as well as the pronominal strategy which, in English, does not normally work for coargument coreference. As a native English speaker, I might respond as follows.

- X1a)\*John hit.
- b) John hit himself.
- c)\*The boys hit.
- d) The boys hit each other.
- e) The boys hit one another.
- f)\*John hit him

Remarks: *Example (X1c) is not possible with any interpretation, reciprocal or reflexive. The*

*IMPLICIT strategy is limited to certain verb classes, as mentioned in section 2.1.3.*

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

- X2a) John washed.
- b) John washed himself.
- c) The boys washed.
- d) The boys washed each other.
- e) The boys washed one another.
- f)\*John washed him.

*Remarks: Examples (X2a) and (X2b) contrast, although the difference is unclear to me. You could say John washed himself clean, but not \*John washed clean. I am not sure why. Example (X2c) can have a reflexive interpretation like (X2a), but (X2a) is \* if it is intended to have a reciprocal reading like (X2d) or (X2e). The implicit (null) strategy, as mentioned in section 2.1.3, is limited to verbs of grooming, etc., so I will not test it further with verbs it is not compatible with.*

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

- X3a)\*John saw himself's mother.
- b)\*John washed mother,
- c)?John and Bill saw each other's mother.
- d)?\*John and Bill saw one another's mother.
- e) John and Bill saw their mother.
- f) John washed/saw his mother.

*Remarks: I had to change the verb to wash to test the implicit strategy, since that strategy is generally impossible with see, but it doesn't help and plurality wouldn't make a difference. We don't have a possessive x-self form, but a pronoun works for coreference here with a singular or plural antecedent. For some reason, the reciprocals sound odd in this construction, but they improve a lot if we replace mother with mothers. Then I would accept (X3c) completely, but maybe (X3d) is still ?. Incidentally, the plural pronoun in (X3e) does not appear to have a reciprocal reading, but maybe it is just vague.*

These are examples of the sorts of responses you might give for your language when you provide sentences for us with gloss, translation, and any commentary that you feel would help us understand.

#### **4.1 Clausemate coconstrual**

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



of each strategy.

#### 4.1.1 Verb class restrictions

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

C1a) Bob saw X.

Bob akamuwene Juma  
Bob a-ka-mu-on-ile Juma  
Bob SM.c.1-PST-OM.c1-see-PFV Juma  
'Bob saw Juma'

b) The women described X.

Avamama vakamwelese Jeni  
a-va-mama va-ka-mu-eles-e Jeni  
aug-c2-woman SM.c2-PST-OM.c1-describe-PFV Jeni  
'The women described Jane'

c) You(pl.) kicked X.

Mkamubumye mwana  
m-ka-mu-bumil-ile mu-ana  
SM.c2-PST-OM.c1-kick-PFV c1-child  
'You(pl.) kicked the child'

d) They praised X

Vakamusifye Maria  
Va-ka-mu-sifi-e Maria  
SM.c2-PST-OM.c1-praise-PFV Maria  
'They praised Mary'

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 akiyofwige  
Donna a-ka-i-ofug-ile  
Donna SM.c1-PST-RFM-wash-PFV  
'Donna washed herself'

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

Don akimotsile ifwili  
Don a-ka-i-mog-ile i-fwili  
Don SM.c1-PST-RFM-cut-PFV aug-c10.hair  
'Don cut his hair'

c) The girl cut X [unintentionally] (X = the girl)  
Umuhinza idumwe  
u-mu-hinza a-i-dumul-ile  
aug-c1-girl SM.c1-RFM-cut-PFV  
'The girl cut herself'[unintentionally]

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  
Joni akwivipilaga  
Joni a-ku-i-vip-il-ag-a  
Joni SM.c1-PRS-RFM-hate-HAB-fv  
John hates himself
- b) John is ashamed of X  
Joni akwisikiya nyoni  
Joni a-ka-i-sikiy-a nyoni  
Joni SM.c1-PST-RFM-feel-fv shame  
'John feels ashamed of himself'
- c) John is worried about X  
Joni akwiyogopa  
Joni a-ka-i-ogop-a  
Joni SM.c1-PST-RFM-worry-fv  
'John is worried about himself'
- d) John is proud of X  
Joni akwidaya  
Joni a-ku-i-day-a  
Joni SM.c1-PRS-RFM-feel proud-fv  
'John is feeling proud of himself'
- e) John worries/troubles/pleases X  
Joni akwiyogopaga  
Joni a-ku-i-ogop-ag-a  
Joni SM.c1-PRS-RFM-worry-HAB-fv  
'John worries himself'

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  
Avamama viwulaga

a-va-mama                      va-i-ulag-a  
aug-c2-mother                SM.c2-RFM-kill-fv  
'The women will kill herself'

b) The machines built X (X = themselves)

Amasini gakitsengite gagene  
a-ma-sini                      ga-ka-i-tseng-ite                      ga-g-ene  
aug-c6-mashine                SM.c6-PST-RFM-build-PFV                c6-c6-self  
'The machines built themselves'

c) Igwanda yikihonite yiyene

i-gwanda            yi-ka-i-hon-ite                      yi-y-ene  
aug-c9.shirt    SM.c9-PST-RFM-sew-PFV    c9-c9-self  
'The shirt sewed itself'

Comment: for inanimate subjects, i.e. C5b and C5c the emphatic reflexive pronouns are used for emphasis. But in normal communication, we do not expect these constructions to be used. But in imagery stories, they are used.

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.

Avakwamitsi vakiwakilish-e  
a-va-kwamitsi va-ka-i-wakilish-e  
aug-c2-boy    SM.c1-PST-RFM-represent-PFV  
'The boys represented themselves or each other'

b) John spoke for X.

Joni akiloonje  
Joni a-ka-i-loong-ile  
Joni SM.c1-PST-RFM-speak-PFV  
'John spoke for himself'

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.

Kwiwuka  
Ku-iwuk-a  
INF-RFM.remember-fv  
'to remember'

Kwidaya  
Ku-i-day-a  
INF-RFM-feel proud-fv  
'To feel proud'

Comment: Inherent reflexive reading.

Kwidutsa  
Ku-i-duts-a  
INF-RFM-brag-fv  
'to brag'

Comment: Inherent reflexive reading.

-----  
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.

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

Maria	akipelye isawadi	
Maria	a-ka-i-pel-ile	i-sawadi
Maria	SM.c1-PST-RFM-give-PFV	aug-c9.gift
	'Mary gave the gift to herself'	

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

Joni	akilaje inyumba	
Joni	a-ka-i-lagil-ile	i-nyumba
Joni	SM.c1-PST-RFM-show-PFV	aug-c9.house
	'John showed the house to himself'	

For comparison, also provide judgements for the following:

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

Maria	akipelye isawadi	
Maria	a-ka-i-pel-ile	i-sawadi
Mary	SM.c1-PST-RFM-give-PFV	aug-c9.gift
	'Mary gave herself the gift'	

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

Joni	akilaje kwa vana	
Joni	a-ka-i-lagil-ile	kwa v-ana
Joni	SM.c1-PST-RFM-show-PFV	Prep c2-child
	'John showed herself to the children'	

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 akaloongine na mw-ene  
 Dan a-kaloong-an-ile na mu-ene  
 Dan SM.c1-PST-talk-RCM-PFV Prep c1-self  
 'Dan talked to him'

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

Dan akamulonje Maria kuhusu yimwene  
 Dan a-ka-mu-loong-ile Maria kuhusu yi-mu-ene  
 Dan SM.c1-PST-OM.c1-talk-PFV Mary Prep c1-c1-self  
 'Dan told Mary about herself'

c) Dan gave X a book.

Dan akipelye ikitabu  
 Dan a-ka-i-pel-il-ile i-ki-tabu  
 Dan SM.c1-PST-RFM-give-APPL-PFV aug-c7-book  
 'Dan gave herself a book'

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 snake behind X (X = Mary)

Maria akaiwene inzoka kumugongo gwakwe  
 Maria a-ka-i-on-e i-nzoka ku-mu-gongo gw-akwe  
 Mary SM.c1-PST-OM.c9-see-PFV aug-c9.snake c17-c3-back c3-POSS  
 'Mary saw a snake behind him'

b) Mary called me because of an article about X (X = Mary)

Maria akang'emelye kwasababu ya ibalua kuhusu yimwene  
 Maria a-ka-N-kemel-ile kwasababu ya i-balua kuhusu yi-mu-ene  
 Mary SM.c1-PST-OM.c1-call-PFV because Prep aug-c9.letter prep c1-c1-self  
 'Mary called me because of the letter about herself'

c) John offended Mary because of X (X = John)

Joni akamulitsile Maria kwasababu ya mwene

Joni	a-ka-mu-lig-ile	Maria	kwabababu	ya	mu-ene
John	SM.c1-PST-OM.c1-offend-PFV	Mary	because	Prep	c1-him
'John offended Mary because of him'					

d) We laughed in spite of X  
 tuhesile licha ya Maria  
 tu-hek-ile licha ya Maria  
 SM.c2-laugh-PFV in spite of Mary  
 'We laughed in spite of Mary'

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.

C11a) Mary showed Hal to X.

*Maria amulaje Hal kwa yimwene					
Maria	a-ka-mu-lagil-ile	Hal	kwa	yi-mw-ene	
Mary	SM.c1-PST-OM.c1-show-PFV	Hal	Prep	c1-c1-self	
'Mary showed Hal to himself'					

Comment: The sentence does not make sense in terms of interpretation. They only make sense if, for example, we refer to X as Emphatic reflexives not typical objects. In such cases, other objects must be added for the sentences to be grammatical.

b) Mary showed X to Hal.

*Maria akamulaje Hal kwa yimwene					
Maria	a-ka-mu-lagil-ile	Hal	kwa	yi-mw-ene	
Mary	SM.c1-PST-OM.c1-show-PFV	Hal	Prep	c1-c1-self	
'Mary showed Hal to himself'					

Comment: The sentence does not make sense in terms of interpretation. They only make sense if, for example, we refer to X as Emphatic reflexives not typical objects. In such cases, other objects must be added for the sentences to be grammatical.

c) Bill gave Hal X.

*Bill akampelye Hal yimwene					
Maria	a-ka-mu-pel-ile	Hal	yi-mw-ene		
Mary	SM.c1-PST-OM.c1-give-PFV	Hal	c1-c1-self		
'Mary gave Hal himself'					

Comment: The sentence does not make sense in terms of interpretation. They only make sense if, for example, we refer to X as Emphatic reflexives not typical objects. In such cases, other objects must be added for the sentences to be grammatical.

d) Bill gave X Hal.

\*Bill akampleye yimwene Hal

Bill	a-ka-m-pel-ile		yi-mw-ene	Hal
Bill	SM.c1-PST-OM.c1-give-PFV	c1-c1-self		Hal

Comment: The sentence does not make sense in terms of interpretation. They only make sense if, for example, we refer to X as Emphatic reflexives not typical objects. In such cases, other objects must be added for the sentences to be grammatical.

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

Maria	akavawutsitse	avakwamitsi	kuhusu	vavene/kila	munu
Maria	a-ka-va-wuts-itse		a-va-kwamitsi	kuhusu	va-v-ene/kila munu
Mary	SM.c1-PST-OM.c2-ask-PFV	aug-c2-boy	Prep	c2-c2-self/each other	

‘Mary asked the boys about themselves/each other’

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

Maria	akavatambulishe	avakwamitsi	kwa	kila	munu
Maria	a-ka-va-tambulish-e		a-va-kwamitsi	kwa	kila munu
Mary	SM.c1-PST-OM.c2-introduce-PFV	aug-c2-boy	Prep	each other	

‘Mary introduced the boys to each other’

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.

Bill	akaloonzile	kuhusu	Hal	kwa	yi-mw-ene
Bill	a-ka-loong-ile		Hal	Prep	c1-c1-self
Bill	SM.c1-PST-talk-PFV	Prep	Hal	Prep	

‘Bill talked about Hal to himself’

b) Mary talked about X to Hal.

Maria	akaloonzile	kuhusu	Hal	kwa	yi-mw-ene
Maria	a-ka-loong-ile		Hal	Prep	c1-c1-self
Mary	SM.c1-PST-talk-PFV	Prep	Hal	Prep	

‘Mary talked about Hal to himself’

c) Mary talked to Hal about X

Maria	akaloonzile	kwa	Hal	kuhusu	yi-mw-ene
Maria	a-ka-loong-ile		Hal	Prep	c1-c1-self
Mary	SM.c1-PST-talk-PFV	Prep	Hal	Prep	

‘Mary talked to Hal about himself’

d) Mary talked to X about Hal.

Maria	akaloonzile	kwa	Hal	kuhusu	yi-mw-ene
Maria	a-ka-loong-ile		Hal	Prep	c1-c1-self
Mary	SM.c1-PST-talk-PFV	Prep	Hal	Prep	

‘Mary talked to Hal about himself’

#### 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.

Nick akampije simu yuve

Nick a-ka-mu-pig-ile

Nick SM.c1-PST-OM.c1-beat-PFV

‘Nick telephoned his mother’

simu

c9.phone

yuv-e

mother-PSS

b) Nick combed X's hair.

Nick akichanwe ifwili/Nick akachanwe ifwili

Nick a-ka-i-chanul-ile

Nick SM.c1-PST-RFM-comb-PFV

‘Nick combed his hair’

i-fwili

aug-c10.hair

c) Nick spoke to X's boss.

Nick akaloongine na mutagili vakwe

Nick a-ka-loong-an-ile

Nick SM.c1-PST-talk-RCM-PFV

‘Nick talked to his boss’

na

Prep

mu-tagili

c1-boss

va-kwe

c2-POSS

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

Nick akavisile ikitabub chakwe pamesa

Nick a-ka-vik-ile

Nick SM.c1-PST-put-PFV

‘Nick put his book on the table’

i-ki-tabu

aug-c7-book

cha-kwe

c7-POSS

pa-mesa

C18-table

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

Raisi akampelye Nick isawadi kukijiji chakwe

Rais a-ka-m-pel-ile

President SM.c1-PST-OM.c1-give-PFV

‘The president gave Nick a prize in Nicks’s village’

Nick

Nick

i-sawadi

aug-c9.gift

ku-ki-jiji

c17-c7-village

cha-kwe

c7-POSS

f) The boys washed X's face.

Avakwamitsi vakiyoofwige kuwuso

a-va-kwamitsi va-ka-i-ofug-ile

aug-c2-boy SM.c2-PST-RFM-wash-PFV

‘The boys washed each other’s face’

ku-wuso

c17-face

C14a) Nick's father admires X.

Dade va Nick akumuwendaga Nick

Dad-e v-a

Father-POSS c2-POSS

‘Nick’s father admires Nick’

Nick

Nick

a-ku-mu-wend-ag-a

SM.c1-PRS-OM.c1-admire-HAB-fv

Nick

Nick



b) Nick's ambition destroyed X.

lilengo lya Nick likamudenyite Nick

li-lengo ly-a Nick li-ka-mu-deny-ite Nick

c5-ambition c5-POSS Nick SM.c5-PST-OM.c1-destroy-PFV Nick

'Nick's ambition destroyed Nick'

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

Yuve va Nick akagutse umutuka gwa Nick

yuv-e va Nick a-ka-guts-e u-mu-tuka gwa Nick

mother-POSS Prep Nick SM.c1-PST-sell-PFV aug-c3-car POSS Nick

'Nick's mother sold Nick's car'

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

Avakwamitsi vakatsiwene ipicha tsa vavene/kila munu/vene

a-va-kwamitsi va-ka-tsi-on-ile i-picha tsa va-v-ene  
aug-c2-boy SM.c2-PST-OM.c10-see-PFV aug-10.picture Prep c2-c2-self

'The boys saw pictures of themselves'

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

Maria akavaloonje avakwamitsi kuhusu ipicha tsa vavene/kila munu/vene

Maria a-ka-va-loong-ile a-va-kwamitsi kuhusu i-picha tsa va-v-ene  
Mary SM.c1-PST-OM.c2-talk-PFV aug-c2-boy Prep aug-c10.picture Prep c2-c2-self

'Mary told the boys about the pictures of themselves'

c) The politicians planned attacks against each other.

Avanasiasa vakipaanje uuvamisi

a-va-nasiasa va-ka-i-paang-ile u-u-vamisi  
aug-c2-politician SM.c2-PST-RFM-plan-PFV aug-c14-attack

'The politicians planned attacks against each other'

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

Avanasiasa vakidetye uuvamisi

a-va-nasiasa va-ka-i-det-ite u-u-vamisi  
aug-c2-politician SM.c2-PST-RFM-fake-PFV aug-c14-attack

'The politicians faked against themselves'

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.

C15a) Polly was praised by X

\*Polly akasifiwe na yimwene

Polly a-ka-sifyi-w-e na yi-mw-ene

Polly SM.c1-PST-praise-PASS Prep c1-c1-self

Comment: I think the ungrammaticality of this sentence is caused by the by-phrase of the passive sentences. But if the by-phrase is complemented by another noun other than the *yimwene* 'himself', they become grammatical.

b) Polly was helped by X

\*Polly akatanzilwe na yimwene

Polly a-ka-taang-w-ile na yi-mw-ene

Polly SM.c1-PST-help-PASS-PFV Prep c1-c1-self

Comment: I think the ungrammaticality of this sentence is caused by the by-phrase of the passive sentences. But if the by-phrase is complemented by another noun other than the *yimwene* 'himself', they become grammatical.

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

\*Polly akukalika kwa Polly kuhusu yimwene

Polly a-ku-kagul-ik-a kwa Polly kuhusu yi-mu-ene

Polly SM.c1-PRS-know-ST-fv Prep Polly Prep c1-c1-self

Comment: I think the ungrammaticality of this sentence is caused by the by-phrase of the passive sentences. But if the by-phrase is complemented by another noun other than the *yimwene* 'himself', they become grammatical.

d) The wax melted itself

Inta ikayeywike yiyene

i-nta i-ka-yeyuk-ile yi-y-ene

aug-c9.wax SM.c9-PST-melt-PFV c1-c1-self

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

C16a) I saw X.

Ngiwene  
N-ka-i-on-ile  
SM.c1-PST-RFM-see-PFV  
'I saw myself'

b) You saw X. (etc.)

ukiwene  
u-ka-i-on-ile  
SM.c1-PST-RFM-see-PFV  
'You saw yourself'

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

C17a) I washed X.

Ngiyofwige  
N-ka-i-ofug-ile  
SM.c1-PST-RFM-ofug-ile  
'I washed myself'

b) I hate X.

ngwivipilaga  
N-ku-i-vip-il-ag-a  
SM.c1-PRS-RFM-hate-HAB-fv  
'I hate myself'

c) I told John about X

ngamuloonje Joni kuhusu yinene  
N-ka-mu-loong-ile                      Joni    kuhusu                      yi-nene  
SM.c1-PST-OM.c1-talk-PFV              John    Prep                              c1-self  
'I told John about myself'

d) I saw a snake near X

ngayiwene inzoka panyuma yangu  
N-ka-i-on-ile                              i-nzoka                      pa-nyuma                      y-angu  
SM.c1-PST-OM.c9-see-PFV              aug-c9.snake              c18-behind                      c1-POSS  
'I saw a snake near me'

e) I am liked by X.

\*nguwendwa na yinene  
N-ku-wend-w-a                              na                      yi-nene  
SM.c1-PRS-like-PASS-fv                      Prep                      c1-self

f) I telephoned X's mother

ngampije mama vayinene isimu

N-ka-m-pig-ile                      yuva                      va      yi-nene                      i-simu  
 SM.c1-PST-OM.c1-beat-PFV                      mother                      POSS   c1-self                      aug-c9.phone  
 ‘I telephoned my mother’

g) My father admires X  
 Dadangu akwiwendaga  
 Dada-ngu      a-ku-i-wend-ag-a  
 Father-POSS   SM.c1-PRS-RFM-admire-HAB-fv  
 ‘My father admires himself’

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

C18a) History repeats X  
 Histolia ikwipilukilaga  
 Histolia                      i-ku-i-piluk-il-ag-a  
 Histolia                      SM.c9-PRS-RFM-comeback-APPL-HAB-fv  
 ‘History repeats itself’

b) This type of fish cannibalizes X  
 Isamaki aina iyi yikwilitsaga  
 i-samaki      aina      i-yi      yi-ku-i-ly-its-ag-a  
 aug-c9.fish      type      aug-c9   SM.c9-PRS-RFM-eat-CAUS-HAB-fv  
 ‘This type of fish eats itself’

c) This machine destroys X (e.g., after you use it)  
 ilimasini ili likibomolaga lilyene  
 i-li-masini                      ili      li-ku-i-bomol-ag-a                      li-ly-ene  
 aug-c5-machine                      i-c5      SM.c5-PRS-RFM-destroy-HAB-fv      c5-c5-self  
 ‘This machine destroys itself’

Comment: It seems like animacy or humanity plays some roles in the choice of the strategies used. For example, it makes more sense to add emphatic reflexive pronoun in (C18c). I’m not quite sure if adding this EP has something related to animacy.

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.

Not 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.  
 Kila mumama akiwene  
 Kila      mu-mama      a-ka-i-on-ile

Every c1-woman SM.c1-PST-RFM-see-PFV  
'Every woman saw herself'

b) Every child washed X.

Kila mwana akiyofwige  
Kila mu-ana a-ka-i-ofug-ile  
Every c1-child SM.c1-PST-RFM-wash-PFV  
'Every child washed'

c) Every student hates X.

Killa mwanashule akivipilaga  
Kila mu-anashule a-ku-i-vipil-ag-a  
Every c1-student SM.c1-PRS-RFM-hate-HAB-fv  
'Every student hates herself'

d) Every child saw a snake near X.

Kila mwana akayiwene inzoka kalibu na yimwene  
Kila mu-ana a-ka-yi-on-Ile i-nzoka kalibu na mu-ene  
Every c1-child SM.c1-PST-OM.c9-see-PFV aug-c9.snake near Prep c1-him  
'Every child saw a snake near him'

e) Every child telephoned X's mother.

Kila mwana akampije yuve isimu  
Kila mu-ana a-ka-m-pig-ile yuv-e i-simu  
Every c1-child SM.c1-PST-OM.c1-call-PFV mother-POSS aug-phone  
'Every child telephoned her mother'

f) Every child's father admires X.

Kila dade va mwana akumuwendaga mwanakwe  
Kila dad-e va mu-ana a-ku-mu-wend-ag-a mu-ana-kwe  
Every father-POSS Prep c1-child SM.c1-PRS-OM.c1-admire-fv c1-child-POSS  
'Every child's father admires his child'

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

Comment: If we replace 'Every N' with 'No N', we get the following translation:

Kugaya mwana akiyofwige  
Kugaya mu-ana ye-a-ka-i-ofug-ile  
No c1-child REL-SM.c1-PST-RFM-wash-PFV  
'There is no child who washed'

Comment: The relative marker must also be added in such sentences where the subject is negated. This applies for all sentences in C19 if negated.

4.1.3.5 Questioned antecedents - As in (C19), X is coreferent with the wh-word in all of the following (if C20e is possible in your language). If your language leaves question words in situ, translate accordingly, and if your language allows both in situ and fronted questions, then provide examples of both possibilities and judgments for each of the coreference strategies.

C20a) Who saw X?

Nani akiwene?

Who a-ka-i-on-ile?

Qn SM.c1-PST-RFM-see-PFV

‘Who saw himself?’

b) Who washed X?

Nani akiyofwige?

Who a-ka-i-ofug-ile

Qn SM.c1-PST-RFM-wash-PFV

‘Who washed himself?’

c) Who saw a snake near X?

Nani akayiwene inzoka kalibu na mwene?

Who a-ka-i-on-ile i-nzoka kalibu na mw-ene

Qn SM.c1-PST-RFM-see-PFV aug-c9.snake near Prep c1-him

‘Who saw a snake behind him?’

d) Who telephoned X's mother?

Nani akampije yuve?

Who a-ka-m-pig-ile

yuv-e

Qn SM.c1-PST-OM.c1-beat-PFV

mother-POSS

‘Who telephoned his mother’

e) Whose father admires X?

nani akuwendwaga na dade?

Who a-ku-wend-w-ag-a

na dad-e

Qn SM.c1-PRS-admire-PASS-HAB-fv Conj father-POSS

‘Whose father admires him’

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

C21a) X saw Fred.

\*Yimwene akamuwene Fred

yi-mu-ene a-ka-mu-on-ile

Fred

c1-c1-self SM.c1-PST-OM.c1-see-PFV

Fred

b) X saw us. (X=us)

\*Yihwehwe tukiwene

yi-hwe-hwe tu-ka-i-on-ile

c2-c2-self SM.c2-PST-RFM-see-PFV

c) X saw a snake behind Fred.

\*Yimwene akayiwene inzoka panyuma panyuma pa Fred

yi-mu-ene	a-ka-i-on-ile	i-nzoka	pa-nyuma	pa Fred
c1-c1-self	SM.c1-PST-RFM-see-PFV	aug-c9.snake	c18-behind	c18 Fred

d) X impressed Fred

\*Yimwene akamuvutye Fred  
 yi-mu-ene a-ka-mu-vut-ile Fred  
 c1-c1-self SM.c1-PST-OM.c1-impress-PFV Fred

e) Bill spoke to X about Fred.

\*Bill akaloongine nave kuhusu Fred  
 Bill a-ka-loong-an-ile kuhusu Fred  
 Bill SM.c1-PST-talk-RCM-PFV Prep Fred

f) Bill told X about Fred

\*Bill akamuloonje yimwene kuhusu Fred  
 Bill a-ka-mu-loong-ile yi-mu-ene kuhusu Fred  
 Bill SM.c1-PST-OM.c1-talk-PFV c1-c1-self Prep Fred

g) X was praised by Fred.

\*Yimwene akasifiwe na Fred  
 yi-mu-ene a-ka-sifyi-w-e na Fred  
 c1-c1-self SM.c1-PST-praise-PASS Prep Fred

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

\*Yimwene akuwendwa na mwene  
 yi-mu-ene a-ku-wend-w-a na mu-ene  
 c1-c1-self SM.c1-PRS-like-PASS-fv Prep c1-self

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

C22a) X telephoned George's mother.

b) X's mother wanted to improve George.

c) X's mother worried/impressed George.

d) Mary told X's mother about George.

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

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

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.

Avamama vakitaang-ag-a

a-va-mama                      va-ka-i-taang-ag-a

aug-c2-woman                SM.c2-PST-RFM-help-HAB-fv

‘The women help themselves/each other’

Comment: This example allows the unstarred interpretations below. (in C24 of the AQR)

- a) \*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.

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.

Comment: It permits C24b), C24d), C24e), and C24f)

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, (C24a,e) 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.

**For Data Entry: Give Afranaph ID number in database for the reference in the comments for these C25 sentences.**

C25a) The women praised X.



Avamama vakisifye

a-va-mama                      va-ka-i-sifyi-ie  
aug-c2-woman                SM.c.2-PST-RFM-praise-PFV  
'The women praised themselves/each other'

Comment: See interpretations allowed for C23.

b) The women will support X.

Avamama vitaanga  
a-va-mama                      va-i-taang-a  
aug-c2-woman                SM.c.2-RFM-help-fv  
'The women will support themselves/each other'

Comment: See interpretations allowed for C23.

c) The women photographed X.

Avamama vakipigite ipicha  
a-va-mama                      va-ka-i-pig-ite                      i-picha  
aug-c2-woman                SM.c2-PST-RFM-beat-PFV            aug-photo  
'The women photographed themselves/each other'

Comment: See interpretations allowed for C23.

d) The women betrayed X.

Avamama vakisalitite  
a-va-mama                      va-ka-i-saliti-ite  
aug-c2-woman                SM.c2-PST-RFM-betray-PFV  
'The women betrayed themselves/each other'

Comment: See interpretations allowed for C23.

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?

Comment: All those examples in C25 permit both reflexive and reciprocal 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."

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"

Kwitaang'ana  
Ku-i-taang'an-a  
INF-RCM-meet-fv

‘to meet’

Kwiwona  
Ku-i-on-a  
INF-RFM-see-fv  
‘to see oneself/each other’

Kwitova  
Ku-i-tov-a  
INF-RFM-beat-fv  
‘to beat oneself/each other’

Kwibumila  
Ku-i-bumil-a  
INF-RFM-hit-fv  
‘to hit oneself/each other’

Kuloongana  
Ku-loong-ana  
INF-talk-RCM  
‘to talk to each other’

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.

Joni na Maria vakisifye  
Joni na Maria va-ka-i-sify-ile  
John Conj Mary SM.c2-PST-RFM-praise-PFV  
‘John and Mary praised themselves/each other’

b) The women praised X.

avamama vakisifye  
a-va-mama va-ka-sify-ile  
aug-c2-woman SM.C2-PST-praise-PFV  
‘The women praised themselves/each other’

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.

Joni na Maria vakaloongine  
 Joni na Maria           va-ka-loong-an-ile  
 John Conj Mary       SM.c.2-PST-talk-RCM-PFV  
 ‘John and Mary spoke to each other’

b) John and Mary met with X.

Joni na Maria vakitaang’ine  
 Joni na Maria           va-ka-i-taang’an-ile  
 John Conj Mary       SM.c.2-PST-RFM-meet-PFV  
 ‘John and Mary met (with each other)’

c) John and Mary gave this book to X.

Joni na Maria vakipelye ikitaburu iki  
 Joni na Maria           va-ka-i-pel-ile                           i-ki-tabu       i-ki  
 Joni Conj Mary       SM.c.2-PST-RFM-give-PFV   aug-c7-book   aug-c7  
 ‘John and Mary gave this book to themselves/each other’

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.

Bill na Maria vakuhotsaga lwa vakiwendaga  
 Bill na Maria           va-ku-hots-ag-a                   lwa       va-ku-i-wend-ag-a  
 Bill Conj Mary   SM.c.2-PRS-think-HAB-fv       that   SM.c.2-PRS-RFM-like-HAB-fv  
 ‘Bill and Mary think that they like themselves/each other’

#### 4.1.4.3 Sociative readings

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

C31a) The baboons left together

Imuuma tsikahetsile lumwi  
 i-muuma               tsi-ka-heg-ile                           lumwi  
 aug-c10.baboon       SM.c.10-PST-leave-PFV               together  
 ‘The baboons left together’

b) The baboons ate fish together

Imuuma tsikalaye isomba lumwi  
 i-muuma               tsi-ka-ly-e                               i-somba       lumwi  
 aug-c9.baboon       SM.c9-PST-eat-PFV                   aug-c9.fish   together  
 ‘The baboon ate fish together’

#### 4.1.4.4 Antipassive readings

C32a) That dog bites people.

Imbwa yila yikulumaga avanu

i-mbwa yi-la yi-ku-lum-ag-a a-va-nu  
 aug-c9.dog c9-DEM SM.c.9-PRS-bite-HAB-fv aug-c2-person  
 'The dog bites people'

b) The government arrests people.

Iselikali ikwibataga avanu  
 i-selikali i-ku-ibat-ag-a a-va-nu  
 aug-selikali SM.c.9-PRS-arrest-HAB-fv aug-c2-person  
 'The government arrests people'

c) Bill praises people

Bill akusifyaga avanu  
 Bill a-ku-sify-ag-a a-va-nu  
 Bill SM.c1-PRS-praise-HAB-fv aug-c2-person  
 'Bill praises people'

## 4.2 Cross-clausal binding

Cases of coreference across clause boundaries fall into two major categories: in some cases, the coconstrual strategy permits relations between arguments in different clauses just in case the distance across clauses is determined by a relationship that is in principle local. In languages like English, the X-SELF strategy can be used to relate the thematic subject of a subordinate clause to the subject of the immediately higher one, as in (X4).

X4) John expects himself to win.

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

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

X6) *Jón segir að Haraldur elski stúlkuna sem hafi kysst sig.*  
 Jon said that Harald loves-SUBJ the-girl that kissed-SUBJ SIG  
 "Jon said that Harald loves the girl that kissed *him*."

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

X7) *Zhangsan shuo Lisi chang piping ziji*  
Zhangsan say Lisi often criticize ZIJI  
"Zhangsan says that *Lisi* often criticizes *him*."

However, in many long distance antecedency cases like Chinese ziji, there are quite a number of semantic and discourse conditions that appear to restrict the effect, or only permit it under certain interpretations. This section explores whether or not a given strategy permits a non-clausemate antecedent and if so, just how far away the antecedent can be and what sorts of conditions restrict it.

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

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

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

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

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

Jack akatije hela ana luhala  
 Jack a-ka-tigil-ile hela a-na luhala  
 Jack SM.c1-PST-say-PFV that c1-POSS intelligent  
 'Jack said that he is smart'

Comment: Assuming Jack=he.

b) Jack knows that George likes X.

Jack akulukagula pakutya George akumuwendaga  
 Jack a-ku-lukagul-a pakutya George a-ku-mu-wend-ag-a  
 Jack SM.c1-PRS-know-fv that George SM.c1-PRS-OM.c1-like-HAB-fv

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

Jack akulukagula pakutya Bill akatije hela Jack ana luhala  
 Jack a-ku-lukagul-a pakutya Bill a-ka-tigil-ile  
 Jack SM.c1-PRS-know-fv that Bill SM.c1-PST-say-PFV

hela Jack a-na luhala  
 that Jack c1-POSS intelligent  
 'Jack knows that Bill said that Jack is smart/intelligent'

Comment: Assuming Jack=he.

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

Jack akuhotsaga pakutya Lisa akulukagula pakutya Wendy akumuwendaga Jack  
 Jack a-ku-hots-ag-a pakutya Lisa a-ku-lukagul-a  
 Jack SM.c1-PRS-think-HAB-fv that Lisa SM.c1-PRS-know-fv

pakutya Wendy a-ku-mu-wend-ag-a Jack  
 that Wendy SM.c1-PRS-OM.c1-love-HAB-fv Jack

Comment: Assuming Jack=he.

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

Jack akuhotsaga pakutya Lisa akulukagula pakutya Jack akumuwendaga Alice  
 Jack a-ku-hots-ag-a pakutya Lisa a-ku-lukagul-a  
 Jack SM.c1-PRS-think-HAB-fv that Lisa SM.c1-PRS-know-fv

pakutya Jack a-ku-mu-wend-ag-a Alice  
 that Jack SM.c1-PRS-OM.c1-love-HAB-fv Alice  
 'Jack thinks that Lisa knows that Jack likes Alice'

Comment: Assuming Jack=he.

f) Sarah told Jack that Lisa loves X.

Sarah akamuloonje Jack pakutya Lisa akumuwendaga Jack  
 Sarah a-ka-mu-loong-ile Jack pakutya Lisa  
 Sarah SM.c1-PST-OM.c1-tell-PFV Jack that Lisa

a-ku-mu-wend-ag-a Jack  
 SM.c1-PRS-OM.c1-love-HAB-fv Jack  
 'Sarah told Jack that Lisa loves Jack'

Comment: Assuming Jack=he.

g) Sarah told Jack that X loves Wendy.

Sarah akaloonje Jack pakutya Jack akumuwendaga Wendy  
 Sarah a-ka-mu-loong-ile Jack pakutya Jack  
 Sarah SM.c1-PST-OM.c1-tell-PFV Jack that Jack

a-ku-mu-wend-ag-a Wendy  
 SM.c1-PRS-OM.c1-love-HAB-fv Wendy  
 'Sarah told Jack that Jack loves Wendy'

Check with consultant.

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.

Jack akidikise pakutya Maria akamuwendite

Jack a-ka-idikil-ile pakutya Maria a-ka-mu-wend-ite

Jack SM.c1-PST-PFV that Mary SM.c1-PST-OM.c1-love-PFV

'Jack admitted that Mary loved him'

b) Jack suspected that Mary loved X.

Jack akahotse pakutya Maria akamuwendite

Jack a-ka-hots-e pakutya Maria a-ka-mu-wend-ite

Jack SM.c1-PST-think-PFV that Mary SM.c1-PST-OM.c1-love-PFV

'Jack thought/suspected that Mary loved him'

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

D3a) Jeff complained about Mary when Ella blamed X

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

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

d) Jeff left without Mary seeing X.

e) Mary condemned Jeff without meeting X.

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.

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 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.]"

#### 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]

Ngudaga [kuhega]  
 N-ku-dag-a [ku-heg-a]  
 SM.c1-PRS-hope-fv [INF-leave-fv]  
 'I hope [to leave]'

I hope [for Bill to leave]

?Ngudaga [Bill kuhega]  
 N-ku-dag-a [Bill ku-heg-a]  
 SM.c1-PRS-hope-fv [Bill INF-leave-fv]  
 'I hope Bill to leave'<sup>2</sup>

I expect [Bill to be unpleasant]

Ngutegemelaga [Bill kuva mubi]  
 N-ku-tegemel-ag-a [Bill ku-va mu-bi]  
 SM.c1-PRS-expect-HAB-fv [Bill INF-be c1-unpleasant]  
 'I expect [Bill to be unpleasant]'

I persuaded Bill [to leave]

Ngamushawishe [Bill kuhega]  
 N-ka-mu-shawish-e Bill [ku-heg-a]  
 SM.c1-PST-OM.c1-persuade-PFV Bill [INF-leave-fv]  
 'I persuaded [Bill to leave]'

b) I made [Bill leave]

?Ngambwitse [Bill ahege]  
 N-ka-mbutsa [Bill a-heg-e]  
 SM.c1-PST-caus-fv [Bill SM.c1-leave-FV]  
 'I made/caused [Bill leave]'

c) I saw [someone leaving]

Ngamuwene [munu akuhega]  
 N-ka-mu-on-ile [mu-nu a-ku-heg-a]  
 SM.c1-PST-OM.c1-see-PFV [c1-person SM.c1-PRS-leave-fv]  
 'I saw [a person leaving]'

<sup>2</sup> In this sentence, *kwa* 'for' cannot be added. It becomes unacceptable

d) I require [that he speak softly]  
 Ngudaga [aloong-ag-e moli moli]  
 N-ku-dag-a [a-loong-e moli moli]  
 SM.c1-PRS-require-fv [SM.c1-speak-fv slowly]  
 I require [he speak slowly]

e) I consider [Bill unpleasant]  
 Nguwona [Bill mubi]  
 N-ku-on-a [Bill mu-bi]  
 SM.c1-PRS-see-fv [Bill c1-ugly]  
 ‘I consider [Bill unpleasant]’

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.

Edga akamususile Bill kumwaamina  
 Edga a-ka-mu-suk-ile Bill ku-mu-amin-a  
 Edga SM.c1-PST-OM.c1-ask-PFV Bill INF-OM.c1-trust-fv  
 ‘Edgar asked Bill to trust him’

Comment: Assuming *him*=Edgar.

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

Edgar akamsusile Bill ampele ikitab  
 Edga a-ka-mu-suk-ile Bill a-mu-pel-e i-ki-tabu  
 Edga SM.c1-PST-OM.c1-ask-PFV Bill SM.c1-OM.c1-give-PFV aug.c7-book  
 ‘Edgar asked Bill to give him a book’

Comment: Assuming *him*=Edgar.

c) Edgar asked Bill to talk to X.

Edgar akamususile Bill valoongane  
 Edga a-ka-mu-suk-ile Bill va-loong-an-e  
 Edga SM.c1-PST-OM.c1-ask-PFV Bill SM.c2-talk-RCM-PFV

‘Edgar asked Bill to talk to/with him’

Comment: Assuming *him*=Edgar.

d) Edgar asked Bill to talk about X.

Edgar akamsusile Bill aloonge kuhusu mwene

Edga	a-ka-mu-suk-ile	Bill	a-loong-e	kuhusu	mu-ene
Edgar	SM.c1-PST-OM.c1-ask-PFV	Bill	SM.c1-talk-PFV	Prep	c1-him

‘Edgar asked bill to talk about him’

Comment: Assuming *him*=Edgar.

e) Edgar expected Bill to trust X.

Edgar akategemye Bill kumwamina

Edga	a-ka-tegemel-ile	Bill	ku-mu-amin-a
Edgar	SM.c1-PST-expect-PFV	Bill	INF-OM.c1-trust-fv

‘Edgar expected Bill to trust him’

Comment: Assuming *him*=Edgar.

f) Edgar ordered Bill to pay X.

Edgar akalamwe Bill amuhombe

Edga	a-ka-lamul-ile	Bill	a-mu-homb-e
Edgar	SM.c1-PST-order-PFV	Bill	SM.c1-OM.c1-pay-PFV

‘Edgar ordered Bill to pay him’

Comment: Assuming *him*=Edgar.

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

Edgar akalamwe Bill atigile hela mwene ana luhala

Edga	a-ka-lamul-ile	Bill	a-tigil-e	hela
Edgar	SM.c1-PST-order-PFV	Bill	SM-say-PFV	tha

mu-ene	a-na	luhala
c1-him	c1-POSS	intelligent

‘Edgar ordered Bill to say that he was intelligent/smart’

Comment: Assuming *him*=Edgar.

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

Edgar akalamwe Bill atigile hela Maria akumuwendaga

Edga	a-ka-lamul-a	Bill	a-tigil-e	hela	Maria
Edgar	SM.c1-PST-order-fv	Bill	SM-say-PFV	that	Mary

a-ka-mu-wend-ite
SM.c1-PST-OM.c1-love-PFV

‘Edgar ordered Bill to say that Mary loved him’

Comment: Assuming *him*=Edgar.

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.

Comment: I don't think we have such kind of structures in Kihehe

- D5a) Edgar expects X to win.
- b) Edgar expects Bill to defeat X.
- D6a) Edgar hopes for X to win.
- b) Edgar hopes for Bill to defeat X.

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

- D7a) Edgar expects Bill to defeat X's brother.
- b) Edgar hopes for Bill to defeat X's brother.
- c) Edgar expects X's brother to defeat him.
- d) Edgar hopes for Bill to defeat X's brother.

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.
- d) Edgar X-expects Bill to defeat.
- D6c) Edgar X-hopes for to win.
- d) Edgar X-hopes for Bill to defeat.

Comment: I don't think this is possible in Kihehe.

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 akwiwonaga ana luhala  
Tom a-ku-i-on-ag a-na luhala  
Tom SM.c1-PRS-RFM-see-HAB-fv c1-POSS intelligent  
'Tom sees/considers himself intelligent'

- b) Tom considers Mary fond of X.

Tom akumuwonaga Maria akiwendaga  
Tom a-ku-mu-on-ag-a Maria a-ka-i-wend-ag-a  
Tom SM.c1-PRS-see-HAB-fv Mary SM.c1-PST-RFM-care-HAB-fv  
'Tom considers Mary fond of herself'

- c) Tom considers Mary angry at X.

Tom akumuonaga Maria akumuvipila  
Tom a-ku-mu-on-ag-a Maria a-ku-mu-vip-il-a  
Tom SM.c1-PRS-OM.c1-see-HAB-fv Mary SM.c1-PRS-OM.c1-be angry-APPL-

fv

‘Tom sees/considers Mary angry at him’

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 coconstructed 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.

Pakutya mwene akacheluwe lukamuvifye Oliva			
Pakuty mu-ene	a-ka-chelew-ile	lu-ka-mu-vip-ile	Oliva
That c1-him	SM.c1-PST-late-PFV	SM.c11-PST-OM.c1-upset-PFV	Oliva

‘That he was late upset Oliver’

Comment: Assuming him=Oliver.

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

Pakutya mwene akacheluwe lukafanyite Oliva awoneke ana makosa			
Pakuty mu-ene	a-ka-chelew-ile	lu-ka-fany-ite	
That c1-him	SM.c1-PST-late-PFV	SM.c11-PST-OM.c1-make-PFV	

  

Oliva a-on-ek-e	a-na	ma-kosa	
Oliva SM.c1-see-ST-PFV	c1-POSS	c6-guilty	

‘That he was late made/suggested Oliver was guilty’

Comment: Assuming he=Oliver.

c) That X was late made Oliver look guilty.

Pakutya mwene akacheluwe lukafanyite Oliver awoneke ana makosa			
Pakuty mu-ene	a-ka-chelew-ile	lu-ka-mu-fany-ite	
That c1-him	SM.c1-PST-late-PFV	SM.c11-PST-OM.c1-make-PFV	

  

Oliver a-on-ek-e	a-na	ma-kosa	
Oliver SM.c1-see-ST-PFV	c1-POSS	c6-guilty	

‘That he was late made Oliver look guilty’

Comment: Assuming he=Oliver.

d) That X was late implicated Oliver.

Pakuty mwene akacheliwe lukamuvafile Oliva

Pakuty mu-ene a-ka-chelew-ile lu-ka-mu-vav-ile Oliva

That c1-him SM.c1-PST-late-PFV SM.c11-PST-OM.c1-implicate-PFV Oliva

‘That he was late implicated Oliver’

Comment: Assuming he=Oliver.

### 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.

Akamukoswe Malik

a-ka-mu-kosol-ile Malik

SM.c1-PST-OM.c1-criticize-PFV Malik

‘He criticized Malik’

Comment: Assuming *he*=Malik.

b) He said Mariam criticized Malik.

Akatije Mariam akamkoswe Malik

a-ka-tigil-ile Mariam a-ka-mu-kosol-ile Malik

SM.c1-PST-say-PFV Mariam SM.c1-PST-OM.c1-criticize-PFV Malik

‘He said Mariam criticized Malik’

Comment: Assuming *he*=Malik.

c) He criticized the boy.

Akamukoswe umkwamitsi

a-ka-mu-kosol-ile u-mu-kwamitsi

SM.c1-PST-OM.c1-criticize-PFV aug-c1-boy

‘He criticized the boy’

Comment: Assuming *he*=the boy.

d) He said Mariam criticized the boy.

Akatije Mariam akamkoswe umkwamitsi

a-ka-tigil-ile Mariam a-ka-mu-kosol-ile

SM.c1-PST-say-PFV Mariam SM.c1-PST-OM.c1-criticize-PFV

u-mu-kwamitsi

aug-c1-boy

‘He said Mariam criticized the boy’

Comment: Assuming *he*=the boy.

E2a) His mother criticized Malik.

Yuve akamkoswe Malik  
yuv-e a-ka-mu-kosol-ile Malik  
mother-POSS SM.c1-PST-OM.c1-criticize-PFV Malik  
‘His mother criticized Malik’

Comment: Assuming *his*=Malik.  
RECHECK WITH CONSULTANT

- b) His mother said Mariam criticized Malik.
  - c) His mother criticized the boy.
  - d) His mother said Mariam criticized the boy.
- E3a) The man who he liked criticized Malik  
b) The man who he liked criticized the boy.  
c) The man who liked him criticized 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 akamkoswe Malik  
Malik a-ka-mu-kosol-ile Malik  
Malik SM.c1-PST-OM.c1-criticize-PFV Malik  
‘Malik criticized Malik’

b) Malik said Mariam criticized Malik.  
Malik akatije Mariam akamkoswe Malik  
Malik a-ka-tigil-ile Mariam  
Malik SM.c1-PST-say-PFV Mariam  
  
a-ka-mu-kosol-ile Malik  
SM.c1-PST-OM.c1-criticize-PFV Malik  
‘Malik said Mariam criticized Malik’

c) The boy criticized the boy.  
Umkwamitsi akamkoswe umkwamitsi  
u-mu-kwamitsi a-ka-mu-kosol-ile u-mu-kwamitsi  
aug-c1-boy SM.c1-PST-OM.c1-criticize-PFV aug-c1-boy  
‘The boy criticized the boy’

d) The boy said Mariam criticized the boy.  
Umkwamitsi akatije Mariam akamkoswe umkwamitsi  
u-mu-kwamitsi a-ka-tigil-ile Mariam  
aug-c1-boy SM.c1-PST-say-PFV Mariam  
a-ka-mu-kosol-ile u-mu kwamitsi  
SM.c1-PST-OM.c1-criticize-PFV aug-c1-boy  
‘The boy said Mariam criticized the boy’

- E5a) Malik's mother criticized Malik.
- b) Malik's mother said Mariam criticized Malik.
- c) The boy's mother criticized the boy.
- d) The boy's mother said Mariam criticized the boy.
- E6a) The man who Malik liked criticized Malik
- b) The man who the boy liked criticized the boy.
- c) The man who liked the boy criticized the boy.

Now consider whether the boy = Malik for the following examples

- E7a) The boy criticized Malik.
- b) The boy said Mariam criticized Malik.
- c) Malik criticized the boy.
- d) Malik said Mariam criticized the boy.
- E8a) The boy's mother criticized Malik.
- b) The boy's mother said Mariam criticized Malik.
- c) Malik's mother criticized the boy.
- d) Malik's mother said Mariam criticized the boy.
- E9a) The man who the boy liked criticized Malik
- b) The man who Malik liked criticized the boy.
- c) The man who liked Malik criticized the boy.
- d) The man who liked the boy criticized 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.

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

Larry akaloonje Zeke pakutya Mike siakumuwendagi ndaa  
 Larry a-ka-loong-ile Zeke pakutya Mike si-a-ku-mu-wend-ag-i  
 Larry SM.c1-PST-say-PFV Zeke that Mike NEG-SM.c1-PRS-OM.c1-like-HAB-fv

ndaa  
 NEG  
 'Larry told Zeke that Mike does not like him'

Comment: Assuming *him*=Zeke.

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

Zeke akaloonje Larry pakutya Mike siakumuwendagi ndaa  
 Zeke a-ka-loong-ile Larry pakutya Mike  
 Zeke SM.c1-PST-say-PFV Larry that Mike

si-a-ku-mu-wend-ag-i ndaa  
 NEG-SM.c1-PRS-OM.c1-like-fv NEG  
 'Zeke told Larry that Mike does not like him'

Comment: Assuming *him*=Zeke.

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

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

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

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

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

Yuve va Zeke akuhotsaga pakutya Mike siakumuwendagi ndaa  
 yuv-e va Zeke a-ku-hots-ag-a pakutya  
 mother-POSS Prep Zeke SM.c1-PRS-think-HAB-fv that

Mike si-a-ku-mu-wend-ag-i ndaa  
 Mike NEG-SM.c1-PRS-OM.c1-like-HAB-fv NEG  
 'Zeke's mother thinks that Mike does not like him'

Comment: Assuming *him*=Zeke.

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

Yuve va Zeke akuhotsaga pakutya Zeke siakumuwendagi Mike ndaa  
 yuv-e va Zeke a-ku-hots-ag-a pakutya  
 mother-POSS Prep Zeke SM.c1-PRS-think-HAB-fv that

Zeke si-a-ku-mu-wend-ag-i Mike ndaa  
 Zeke NEG-SM.c1-PRS-OM.c1-like-HAB-fv Mike NEG  
 'Zeke's mother thinks that Zeke does not like Mike'

c) Zeke thinks that Mike does not like X.

Zeke akuhotsaga pakutya Mike siakumuwendagi mwene ndaa

Zeke	a-ku-hots-ag-a	pakutya	Mike	si-a-ku-mu-wend-ag-i
Zeke	SM.c1-think-HAB-fv	that	Mike	NEG-SM.c1-PRS-OM.c1-like-HAB-fv

mu-ene	ndaa
c1-him	NEG

'Zeke thinks that Mike does not like him'

Comment: Assuming *him*=Zeke.

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

Balua ya Zeke ikatije hela Mike siakumuwendagi ndaa

Balua	ya	Zeke	i-ka-tigil-ile	hela	Mike
c9.letter	Prep	Zeke	SM.c9-PST-say-PFV	that	Mike

si-a-ku-mu-wend-ag-I	ndaa
NEG-SM.c1-PRS-OM.c1-like-HAB-fv	NEG

'Zeke's letter said that Mike does not like him'

Comment: Assuming *him*=Zeke.

e) Zeke heard that Mary did not like X.

Zeke akapuliike pakutya Maria siakamuwenditi ndaa

Zeke	a-ka-pulik-e	pakutya	Maria	si-a-ka-mu-wend-iti	ndaa
Zeke	SM.c1-PST-hear-PFV	that	Mary	NEG-SM.c1-PST-OM.c1-like-PFV	NEG

'Zeke heard that Mary did not like him'

Comment: Assuming *him*=Zeke.

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

Zeke akaloongilwe pakutya Maria siakamuwenditi ndaa

Zeke	a-ka-loong-il-w-e	pakutya	Maria
Zeke	SM.c1-PST-say-APPL-PASS-PFV	that	Maria

si-a-ka-mu-wend-iti	ndaa
NEG-SM.c1-PST-OM.c1-like-PFV	NEG

'Zeke was told that Mary did not like him'

Comment: Assuming *him*=Zeke.

D13a) Zeke said that X had dressed X.

Zeke akatije hela (mwene) akifwalitse

Zeke	a-ka-tigil-ile	hela	mu-ene	a-ka-i-fwal-itse
Zeke	SM.c1-PST-say-PFV	that	c1-him	SM.c1-PST-RFM-dress-PFV

'Zeke said that he dressed himself'

Comment: Assuming *he*=Zeke.

b) Zeke said that X had wounded X.

Zeke akatije hela (mwene) akitetsitse

Zeke	a-ka-tigil-ile	hela	mu-ene	a-ka-i-tets-itse
Zeke	SM.c1-PST-say-PFV	that	c1-him	SM.c1-PST-RFM-wound-PFV

'Zeke said that he wounded himself'

Comment: Assuming *he*=Zeke.

c) Zeke said that X had tatoed X.

Zeke akatije hela (mwene) akichoolite

Zeke a-ka-tigil-ile hela mu-ene a-ka-i-chol-ite

Zeke SM.c1-PST-say-PFV that c1-him SM.c1-PST-RFM-draw-PFV

‘Zeke said that he tattooed himself’

Comment: Assuming *he*=Zeke.

Comment: There is no new strategy for long distance anaphora. We just see the RFM *i-* being used in cases like D13.

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).

#### 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.

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.

Ozzie akaloonzile kuhusu Harriet na yimwene

Ozzie a-ka-loong-ile kuhusu Harriet na yi-mu-ene

Ozzie SM.c1-PST-talk-PFV Prep Harriet Prep c1-c1-him

‘Ozzie talked about Harriet to himself’

Comment: Assuming *them* would be Ozzie and Harriet =\* Check with Consultant

b) Ozzie talked about X to Harriet.

Ozzie akaloonzile kuhusu yinwene na Harriet kwa Harriet

Ozzie a-ka-loong-ile kuhusu yi-mu-ene na Harriet kwa Harriet

Ozzie SM.c1-PST-talk-PFV Prep c1-c1-him Conj Harriet Prep Harriet

‘Ozzie talked about himself and Harriet to Harriet’

c) Ozzie told Harriet that X should leave.

Ozzie akaloonje Harriet pakutya mwene na Harriet vahege

Ozzie a-ka-loong-ile Harriet pakutya mu-ene  
 Ozzie SM.c1-PST-talk-PFV Harriet that c1-him  
 na Harriet va-heg-e  
 Conj Harriet SM.c2-leave-fv  
 ‘Ozzie told Harriet that him and Harriet should leave’

d) Ozzie told Harriet that Bill dislikes X.

Ozzie akaloonje Harriet pakutya Bill siakumuwendagi yimwene na Harriet ndaa  
 Ozzie a-ka-loong-ile Harriet pakutya Bill  
 Ozzie SM.c1-PST-talk-PFV Harriet that Bill

si-a-ku-mu-wend-ag-i yi-mu-ene na Harriet ndaa  
 NEG-SM.c1-PRS-OM.c1-like-HAB-FV c1-c1-him Conj Harriet NEG  
 ‘Ozzie told Harriet that Bill dislikes himself and Ozzie’

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

Ozzie akatije pakutya Harriet akuhotsaga pakutya Bill siakuvawendagi mwene na Harriet ndaa

Ozzie a-ka-tigil-ile pakutya Harriet a-ku-hots-ag-a  
 Ozzie SM.c1-PST-say-PFV that Harriet SM.c1-PRS-think-HAB-fv

pakutya Bill si-a-ku-va-wend-ag-i mu-ene na  
 that Bill NEG-SM.c1-PRS-OM.c2-like-HAB-fv c1-him Conj

Harriet ndaa  
 Harriet NEG

‘Ozzie said that Harriet thinks that Bill dislikes him and Harriet’

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 cousins think of him?

Mark akogwipe pakutya umwanakwe sikaali salama ndaa.

Mark a-ka-ogop-ile pakutya u-mu-ana-kwe si-ka-ali  
 Mark SM.c1-PST-fear-PFV that aug-c1-child-POSS NEG-PST-AUX

salama ndaa  
 safe NEG

‘Mark feared that his son was not safe’

Akawene nyoni pakutya siakamulinditi ndugu yake ndaa.

a-ka-on-ile                      nyoni   pakutya                      si-a-ka-mu-lind-iti  
SM.c1-PST-see-PFV   shame   that                      NEG-SM.c1-PST-OM.c1-protect

ndugu                      y-ake                      ndaa  
c9.relative              c9-POSS              NEG

‘He was ashamed that he could not protect his relative’

vabinamu yake amhotsa ndauli?

va-binamu              v-akwe                      va-mu-hots-a                      ndauli  
C2-cousin              c2-POSS              SM.c2-OM.c1-think-fv              how

‘What would his cousins think of him?’

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

Mark akashitwike kuyiwona picha yakwe mulikalatasi.

Mark   a-ka-shituk-ile                      ku-i-ona                      picha   y-akwe                      mu-li-kalatasi  
Mark   SM.c1-PST-shock-PFV                      INF-OM.c9                      picture   c9-POSS                      LOC-c5-paper

‘Mark was shocked to see his picture in the paper’

Avafwasi vakwe mbevali vamutenga mwene.

a-va-fwasi                      va-kwe                      mbevali                      va-mu-teng-a                      mu-ene  
aug-c2-supporter              c2-POSS              all                      SM.c2-OM.c1-abandon-fv              c1-him

All his supporters would abandon him

Amuloongela ndauli yuve?

a-mu-loong-el-a                      ndauli   yuv-e  
SM.c1-OM.c1-tell-APPL-fv   how   mother-POSS

How would he tell his mother’

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.

Morris akatije ka siku nalamu kwa Mark

Moris   a-ka-tigil-ile                      ka   siku   nalamu                      kwa   Mark  
Moris   SM.c1-PST-say-PFV   AUX   day   difficult                      Prep   Mark

‘Moris said it was a difficult day for Mark’

Kwanza, Morris akamuloonje pakutya umutuka gwakwe gukahitsilwe.  
 Kwanza      Moris   a-ka-mu-loong-ile                      pakutya                      u-mu-tuka  
 First              Moris   SM.c1-PST-OM.c1-tell-PFV    that                      aug-c3-car  
 gw-akwe              gu-ka-hits-il-w-e  
 c3-POSS              SM.c3-PST-steal-APPL-PASS-PFV  
 First, Morris told him that his car had been stolen

Neke akode itakisi yimusindike kukasi.  
 Neke   a-kod-e              i-takisi                      yi-mu-sindik-e                      ku-kasi  
 Then   SM.c1-hire-fv    aug-c9.taxi              SM.c9-OM.c1-take-fv              LOC-work  
 Then he had to hire a taxi to take him to work

Moris akahotse pakutya mbaa avipe.  
 Moris   a-ka-hots-e                      pakutya                      mbaa   a-vip-e  
 Moris   SM.c1-PST-think-PFV              that                      might   SM.c1-be angry-PFV  
 Morris thought he might be angry'

Comment: This 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.

DATA ENTRY: Enter D17 as if it were a single sentence entry, but show the sentence boundaries by including periods in the translation and hitting return at the end of a sentence in the breakdown and gloss.

D18) A: Look, there's Mark!  
 Lave, Mark yula!  
 Lav-e              Mark   yula  
 Look-fv              Mark   that  
 'Look that is Mark!'

B: He is so handsome.  
 Mwene Munofu swe  
 Mu-ene              mu-nofu              swe  
 C1-him              c1-good              so  
 'He is so handsome'

A: I would not want to be his wife though. All the women are chasing him.  
 Singudaga ngomwe kwa mwene ndaa. Avamama mbevali vakumudaga mwene  
 Si-n-ku-dag-a                      n-gom-w-a                      kwa   mu-ene   ndaa  
 NEG-SM.c1-PRS-want-fv    SM.c1-marry-PASS-fv              Prep   c1-him   NEG  
  
 a-va-mama                      mbevali                      va-ku-mu-dag-a              mu-ene  
 aug-c2-woman              all                      SM.c2-PRS-OM.c1    c1-him  
 'I would not want to be his wife. All women are chasing him'

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

Kangi, nguwonaga akwidayaga swe.  
 Kangi n-ku-on-ag-a a-ku-i-day-ag-a swee  
 Also SM.c1-PRS-see-HAB-fv SM.c1-PRS-RFM-praise-HAB-fv a lot  
 ‘Also, I think he praises himself too much’

This scenario supposes 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.

DATA ENTRY: Enter D18 as if it were a single sentence entry, but show the sentence boundaries by including periods in the translation and hitting return at the end of a sentence in the breakdown and gloss.

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.
- b) Larry thinks that I respect X.
- c) Larry thinks that Mary respects X.
- d) Larry thinks that the boys respect X.
- e) The men think that the boys respect X. (X = the men)

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

- D20a) Larry thinks that Bill knows that Dave respects X.
- b) Larry thinks that I know that Dave respects X.
- c) Larry thinks that Mary knows that Dave respects X.
- d) Larry thinks that the boys know that Dave respects X.
- e) The men think that the boys know that Dave respects. (the men = X)

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.
- b) Walter thinks that Bill told me that Dave respects X.
- c) Walter told me that Dave respects X.
- d) Walter said that Dave gave me a book about X.

#### 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 akuvipaga ulukani pakutya Maria akumuvipilaga  
 Ira a-ku-vip-ag-a u-lu-kani pakutya Maria  
 Ira SM.c1-PRS-hate-HAB-fv aug-c12-fact that Mary

a-ku-mu-vip-il-ag-a  
 SM.c1-PRS-OM.c1-hate-APPL-HAB-fv  
 ‘Ira hates the fact that Mary hates him’

b) Ira respects the man who likes X.

Ira akumuheshimulaga umunu yeakumuwendaga mwene  
 Ira a-ku-mu-heshimul-ag-a u-mu-nu  
 Ira SM.c1-PRS-OM.c1-respect-HAB-fv aug-c1-person

ye-a-ku-mu-wend-ag-a mu-ene  
 REL-SM.c1-PRS-OM.c1-like-HAB-fv c1-him  
 ‘Ira respects the man who likes him’

c) Ira says that the man who likes X is intelligent.

Ira akutigilaga hela umunu yeakumuwendaga ana luhala  
 Ira a-ku-tigil-ag-a hela u-mu-nu  
 Ira SM.c1-PRS-say-HAB-fv that aug-c1-person

ye-a-ku-mu-wend-ag-a a-na luhala  
 REL-SM.c1-PRS-OM.c1-like-HAB-fv c1-POSS intelligence  
 ‘Ira says that the man who likes him is intelligent’

d) Ira asked whether Bill saw X.

Ira akawutse kama Bill akamuwene mwene  
 Ira a-ka-wuts-e kama Bill a-ka-mu-on-ile mu-ene  
 Ira SM.c1-PST-ask-PFV whether Bill SM.c1-PST-OM.c1-see-PFV c1-him  
 ‘Ira asked whether Bill saw him’

e) Ira asked when Bill saw X.

Ira akawutse panili pe Bill akamuwene mwene  
 Ira a-ka-wuts-e panili pe Bill a-ka-mu-on-ile mu-ene  
 Ira SM.c1-PST-ask-PFV when REL Bill SM.c1-PST-OM.c1-see-PFV c1-him  
 ‘Ira asked when Bill saw him’



f) Ira did not realize that George followed X.

Ira siakalukagwi pakutya George akamufwatite ndaa

Ira si-a-ka-lukagul-i pakutya George  
Ira NEG-SM.c1-PST-realize-fv that George

a-ka-mu-fwat-ite ndaa  
SM.c1-PST-OM.c1-follow-PFV NEG  
'Ira did not realize that George followed him'

g) Ira said that Mary was pretty and that she would marry X.

Ira akatije hela Maria ali munofu na pakutya ahwana amutegule Maria

Ira a-ka-tigil-ile hela Maria ali i-mu-nofu  
Ira SM.c1-PST-say-PFV that Mary AUX aug-c1-pretty

na pakutya a-hwan-a a-mu-tegul-e  
Conj that SM.c1-can-fv SM.c1-OM.c1-marry-PFV  
'Ira said that Mary was pretty and that she would marry him'

#### 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.

Comment: No such morphological distinction in Kihehe

