PART 2 An inventory of reflexive and reciprocal strategies

In this section, we compile an inventory of strategies for coreference in your language. At this point we are only attempting to get a brief overview of the strategies and so we only want from you a few exemplars of each strategy. The properties of each strategy will be investigated in more detail in the following sections.

By the end of this section you should have a small number of sentences, each of which uses a different way to express a reflexive relationship. For English, for example, we might get John saw himself, and John washes as two forms of the reflexive strategy (where the second is more lexically restricted) and one form for the reciprocal strategy The children like each other.

Pay special attention to parts of a strategy that appear to be optional. In such cases you should list two strategies, one with and one without the "optional" element.

For example, Javanese has two reflexive constructions, awak+pronoun+dewe and awak+pronoun. It would be incorrect to treat them as a single construction in which dewe is optional: on close inspection the two forms turn out to have very different properties. Hence, any "optional" elements in your language should be studied under the assumption that we are dealing with different strategies.

2.1 Coreference in a single clause

2.1.1 "Primary" reflexive strategy - Translate the following example to your language, and indicate the element (if any) that expresses the reflexive relationship. If the verb see is somehow unusual in your language, use a more typical transitive verb instead.

1a) Jôn à ṭe ye zhìi nyor
  Jôn  C1.3SG.SM PST3 see C1.3SG.POSS.PRN body.
John saw his body.
John saw himself.

KS: I have a general question about the gloss for pronominal possessives – is there any reason to assume that they are adjectival? I notice that the POSS here is c1, whereas when the antecedent is plural, the POSS agrees with c6 for ‘bodies’.

1b) Jôn à ṭe ye nyor zhìi
  Jôn  C1.3SG.SM PST3 see body C1.3SG.POSS.PRN.
John saw his body.
John saw himself.

Comment: The translation reflects some semantic meaning as to “see physically” which can be contrasted with “see psychologically” as in (1c).

Comment: Note that there is a discrepancy with the Subject marker (SM) as they don’t match with the noun class distinction especially when preceded by personal pronouns or some plural nouns. The class distinction can be easily done with possessive adjectives and other possessives.

1c) Jôn à ṭe ye zhìi tu njep ṭe nga’.
  Jôn  C1.3SG.SM PST3 see C1a.3SG.POSS.PRN head PREP trouble.
John saw himself in trouble.

Comment: The translation in 1c is different from the body-part usage in 1b. The translation reflects a semantic meaning to “see psychologically” which can be contrasted with “see physically” as in (1b):

1d) Jôn à ṭe ye nyor njec yerclir.
  Jôn  C1.3SG.SM PST3 see body PREP mirror.
John saw his body in a mirror.
John saw himself in a mirror.

Comment: This shows that the possessor can be omitted and the reading can still be reflexive.

KS: When the possessive morpheme is omitted, can the understood possessor be someone other than the subject?

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

2a) Jôn à m ye nè li rlr.
John C1.3SG.SM PST3 see PREP C5.3SG.POSS.PRN C5-eye.
John saw (it) himself.

2b) Jôn à m ye nè mi mmir.
John C1.3SG.SM PST3 see PREP C6.3SG.POSS.PRN C6-eyes.
John saw (it) himself.

Comment: The reflexive is done with the use of the body part where the object is implied in the sense that another subject(s) is excluded from participating in the action.

KS: Would it be correct to say that in these cases, the reading is adverbial, since what John sees is not himself, but whatever he sees, he sees it exclusively?

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

3a) Jôn ke sù’si nyor
John ASP.HAB wash body
John washes himself.

3b) Jôn ke sù’si zhìi nyor
John ASP.HAB wash C1.3SG.POSS.PRN body
John washes himself.

KS: When you consider other verbs that are not 'self-directed', as washing can be, is there a difference in the ability to omit the possessive pronominal adjective? So, for example, when 'kill' is used in a reflexive sentence, can it appear in a sentence like (3a) in place of 'wash' as easily as it appears with (3b)? Maybe you address this later, but it something I would like to explore if there is such a difference, and in particular, I would want to have, if (3a) is limited to a subset of potentially transitive verbs, a list of those verbs.

FN: When I consider other verbs, the possessive pronominal adjective can be left out except when the object is possessed by the subject. For a verb like kill, the reflexive sentence will appear with the use of the body part 'hand'. KS: If John kills himself, he presumably does not kill his hand, but he may do it himself. Would we see ‘John kill his head his hand’?

3c) Jôn ke sù’si nyor zhìi
John ASP.HAB wash body C1.3SG.POSS.FOC.PRN
John washes himself(not another).

3d) Jôn ke sù’si zhìi nyor nè zhìi bo.
John ASP.HAB wash C1a.3SG.POSS.PRN body PREP C1a.3SG.POSS.PRN hand
John washes himself(without the help of another)

Comment: Limbum construction for exclusive subject is truely grammaticalised and not comparable to the English expression with my own hands which can also be used to mark exclusive subject, as can with my own eyes when sight is involved. Limbum had taken such a construction a few steps further in that it can be used for in principle with every action and as a consequence, there is a default body part 'hand' for when no obvious body part is involved.

4a) Mërl à lre e
Mary C1.3SG.SM cut vowel echo
Mary cut herself. [accidentally]

4b) Mërl à lre nyor.
Mary C1.3SG.SM cut body
Mary cut herself. [accidentally]

4c) Mërl à sëe nyor.
Mary C1.3SG.SM cut body
Mary cut herself. [accidentally with a small instrument]

4d) Mërl à gwàr nyor.
Mary C1.3SG.SM cut body
Mary cut herself. [accidentally with a big instrument]
Comment: (4c, d) can occur with possessive adjectives when the action is not accidental.

5a) Rìtu zhi ce koo Jön.
    Shame C7.3SG.SM ASP.CONT catch John.
    John is ashamed of himself.

5bi) ** Jôn rìtu zhi ce koo nè zhi tu.
    Shame C7.3SG.SM ASP.CONT catch PREP C1a.3SG.POSS.PRN head John
    John is ashamed of himself.

5bii) Rìtu zhi ce koo Jôn nè zhii tu.
    Shame C7.3SG.SM ASP.CONT catch PREP C1a.3SG.POSS.PRN head John
    John is ashamed of himself.

Comment: We cannot omit the possessive pronoun adjective for a reflexive reading. The above meaning gives room for the interpretation that someone or some external circumstances caused John to destroy himself. The addition of the body part 'hand' is still possible and it will then mean that John is responsible for his personal destruction.

KS: what is at stake is whether the body part without the possessive is a separate strategy from the body part with the poss-pron-adj. If so, I would say that a verb like 'wash' in Limbum allows these two strategies and some other verbs don't, or perhaps the body part strategy that does not use 'body' but a specific body part cannot omit the poss-pron-adj. As you can see, I am interested in some fine-grained generalizations.

6) Jôn à jep-si zhii tu.
    John C1.3SG.SM confuse-CAUS C1a.3SG.POSS.PRN head
    John destroyed himself.

Comment: With personal pronouns, it is not possible to group the SMs into noun classes but the possessive pronounal adjectives that modify the object agree with the subject and the object classes. KS: Would it be correct to add that 'If the subject were a plural like 'the boys' then the SM would be c2.'

7) Sèe bàni i.
    Sèe bà-ni i.
    3PL.INCL hate-RCM vowel echo
    We hate ourselves.

Comment: The RCM morpheme permits various interpretations but the basic notion is bi-partisan. With some verbs, the morpheme –se is used for multi-party reciprocal action.

KS: There is no SM here?

8a) Woowèe a ke nàa wap butu
    Woowèe a ke nàa wap b-tu
    3PL 3PL.SM ASP.HAB praise C2.3PL.EXCL.POSS.PRN C2-heads
    They praise themselves

Comment: With personal pronouns, it is not possible to group the SMs into noun classes but the possessive pronounal adjectives that modify the object agree with the subject and the object classes. KS: Would it be correct to add that 'If the subject were a plural like 'the boys' then the SM would be c2."

8b) Woowèe a ke nàani.
    Woowèe a ke nàa-ni
    3PL 3PL.SM ASP.HAB praise-RCM
    They praise themselves.

KS: Is it possible for this to have a distributed reflexive reading, e.g., each of them saw himself, as opposed to the group reading where the group (‘they’) saw themselves as a group?

2.1.4 Obliques and other argument types - In the preceding examples, the coindexed arguments were subject and object. Many languages use a different coreference strategy for oblique arguments. Does yours? Consider a variety of oblique objects (dative, genitive, etc., as appropriate for your language), as well subcategorized prepositional arguments (e.g., English Karl counted on himself) and finally prepositional adjuncts (e.g., Sally saw a snake near her/herself).

9a) Jôn à de’ a Mèri
    John C1.3SG.SM speak CONJ Mary.
    John spoke to Mary.

KS: Could this be translated as “John spoke with Mary”, or would that be said differently? In English, 'spoke to' does not necessarily reply that Mary responded, whereas she can be assumed to be a respondent when it is 'speak with'.

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9c) John scolded Mary.

Comment: The verb meaning changes in accordance with the context.

Strategy already used above for the following:

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

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

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

Difficult to translate the following; gave the children herself or themselves?

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

10a) Mary saw a book behind her (another). (subject/locative)

10b) Mary saw a book behind her (Mary). (subject/locative)

11a) John bought the book for himself. (benefactive)

11b) John bought the book for himself. (benefactive)

Comment: The use of zhibi tu-nyor, as opposed to zhibi tu, indicates emphasis.

12a) Etta likes her body.

12b) Etta likes herself.

12c) Etta scares herself.

Comment: KS: Since these two examples are not cases where the body part is part of an adverbial phrase, it is especially interesting that different body parts are used to support the reflexive reading in these two cases. Are these sentences unacceptable if tu is used in (12a) and nyor is used in (12b)? FN: The meaning in (12a) is geared towards the physic whereas (12b) is geared towards behavior or things that have to do with the mind. Thus they will be unacceptable if there is switch as you have suggested.

12d) Etta worries herself.

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

13a) I saw myself.
Comment: This means seeing something in the sense that one can give an eye witness account.

13b) Wè lɛ̀ e
   2SG cut vowel echo
   You cut yourself [accidentally].
Comment: KS: Can this verb be used transitively, e.g., 'You cut the tree/the fish'? If this is possible with a direct object, then Limbum has a missing object strategy for this verb, and perhaps there are other verbs for which this is possible.
FN: If this verb is used transitively, the sentence will no longer carry the accidental reading.

13c) Sèe be sù’si vi-sèe mnyor.
    Sèe be sù’si vi-sèe m-nyor
    1PL.INCL FUT1 wash C6.1PLINCL.POSS.PRN C6-bodies
    We will wash ourselves.

13d) Wèe be kù já’ wee bu.tu.
    Wèe be kù já’ wee b-tu.
    2PL.EXCL FUT1 must help C2.2PL.EXCL.POSS.PRN C2-heads
    You must help yourselves.
Comment: Take note of the multi-subject agreement here i.e plural subjects and plural body parts.

2.1.6 Strategies for other clausemate environments - If there are any additional reflexive strategies known to you (from grammars, or from your linguistic knowledge), list them now. Name each new strategy with a short name or label, and give one example.
Take a few minutes to consider other variations on the sentence types which might involve a special strategy. Some possibilities:
(a) Is there any strategy which is only possible with some special aspectual class of a verb? Some examples:

14) Unique emphatic Pronoun
14a) E fà’ nsuu mimnji’.
    E fà’ nsuu mi-mnjí’.
    3SG work farm 3SG.UNI.EMP
    He ploughed the farm alone/himself

14b) Mè koo mamnji’
    Mè koo ma-mnjí’
    1SG catch 1SG.UNI.EMP
    I caught (it) alone/myself.

15) Focal Pronouns
15a) E dù zhiiy ŭ
    E dù zhii-ŷ ŭ
    3SG go 3SG.FOC.PRO
    He has gone (him)

15b) Mè zhe yaayu.
    Mè zhe yaa-yu
    1SG eat 1SG.FOC.PRO
    I have eaten ((it) me)

16) Unique acquired possessive pronoun
16a) A yaa mbàa tāra’mè.
    Is C7.1SG.POSS.PRN money 1SG.UNLACQ.POSS.PRO
    It is my personal money.

16b) A yøo ndap tāra’wít a?
    Is C1.2SG.POSS.PRN house 2SG.UNLACQ.POSS.PRO Q
    Is it your personal house?
KS: Another way to phrase this in English would be ‘is it your own house?’ Would you use this same unique pronoun for something like “the men make their own beer”, which would not mean the beer they own, but that the men are the makers of the beer?
17) Anaphoric Relativisers

17ai) A rkò nå à? A r-kò nå à?
Is C5-spear ANA.DET DEM.PROX Q.
Is this the spear (you talked about)?

17aii) A rce mè mì yuu nå. A r-ce mè mì yuu nå.
Is C5.3SG.ANA.REL 1SG. PST2 buy ANA.DET.

(17bi) A ma mkuu nå wë.
A ma m-kuu nå wë.
Is C6.1SG.POSS.PRN C6-beans DEM.PROX all
These are all the beans I have.

(17bii) A mce wë rm kap ha’nti nå à?
A m-ce wë rm kap ha’nti nå à?
Is C6.3PL.ANA.REL 2SG PST3 harvest last week ANA.DET Q,
Are they those ones you harvested last week?

18) Pità rì zhìi ndèe
Peter know C1.3SG.POSS.PRN behavior
Peter knows himself.

19) Pità ke jáasi zhii tu.
Peter ASP.HAB criticize C1a.3SG.POSS.PRN head
Peter (habitually) criticizes himself.

KS: Why does the gloss have C1a here instead of C1? FN: Class one nouns are divided into 1 and 1a. There is some tonal differences with the forms.

20) Pità be kù nåa zhii tu.
Peter FUT1 EVI. praise C1a.3SG.POSS.PRN head
Peter is likely to praise himself.

(b) Do quantificational constructions involve a separate strategy?
Comment: In Limbum, quantificational constructions involve the use of verbal suffixes. In single-argument clauses or intransitive clauses –ŋger and –se are used to mark plurality of subjects or plurality of result on subjects whereas the -shi and –ni suffixes are used for multi-argument or transitive clauses to mark plurality of subjects or plurality of result of action on an object. But, only –ŋger and –shi can sometimes be used in quantificational constructions that produce anaphoric effects.

20a) Mmbù mke’ke’ mi ba’ŋger e.
Mm-bù m-ke’ke’ mi ba’-ŋger e.
C6-eggs C6-small C6.3PL.SM break-INTR.PLU. vowel echo
The small eggs (two or more) are broken.

20b) Rbùu rke’ rli ba’ti i.
R-bùu r-ke’ rlii ba’-ti i.
C5-Egg C5-small C5.3PL.SM break-INTR. vowel echo
The small egg is broken.

21a) Mwee mi ceeshi cì’
M-wee mi cee-shi cì’
C6-cats C6-3PL.SM cut-TRN.PLU. cloth
The cats have cut the cloth (into more than two pieces).

21b) Rwëe rli teni cì’
R-wëe rli te-ni cì’
C5-cat C5-3PL.SM cut-TRN.DU cloth
The cat has cut the cloth (into two pieces).

KS: I would like to see examples like the ‘All the men criticized themselves’ with the verbal markers you describe.
The following examples cannot reveal quantification in Limbum.

A7a) Muumbaŋ rù ñrù wɛwɛ à kɛ' zhii tu.
   Boy every C1.3SG.SM look C1a.3SG.POSS.PRN head
   Every boy looked at himself.

b) Byenŋge wɛwɛ a suŋ ðambi Jön né mò' ba mò'.
   Women all 3PL.SM tell PREP John PREP one CONJ one
   All the women described John to themselves.

c) Cicà wɛwɛ à suŋ rli rlii nè Bob.
   Teacher every C1.3SG.SM tell PREP John PREP one CONJ one
   Every teacher introduced himself to Bob.

d) Boomo' a m’ ku ja' ba wap btu.
   Children INDF 3PL.SM PST3 only help FOC C2.3PL.POSS.PRN C2-heads
   Some children only help themselves.

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

22a) * Woowèe a m’ ye yap nyor
    3PL 3PL.SM PST3 see C1.3PL.EXCL.POSS.PRN body
    They saw their body.

Comment: The honorific form woowèe is used when referring to chiefs or kings. a can also be used as it is also a subject pronoun.

22bi) Woowèe a m’ ye wap mnyor
     Woowèe a m’ ye wap m-nyor
     3PL. 3PL.SM PST3 see C6.3PL.INCL.POSS.PRN C6-bodies
     They saw themselves.

Comment: The honorific form woowèe is used when referring to chiefs or kings. a can also be used as it is also a subject pronoun.

KS: If the subject were the noun phrase “the chief”, would the a still be used as the SM? If so, is the c6 possessive still used?

22bii) Woowèe a m’ ye-se mnyor
       Woowèe a m’ ye-se m-nyor
       3PL. 3PL.SM PST3 see-PLU.RCM C6-bodies
       They saw themselves.

Comment: KS: Is -se the plural form of the reciprocal? Is it then the presence of m-nyor that makes the reflexive reading possible? F: Is -se is the plural form of the reciprocal when reference is made to more than two subjects. It is the presence of the –se that makes reflexive reading possible.

KS: But is the reciprocal reading also OK here?

22c) Woowèe a m’ ye-ni i.
     Woowèe a m’ ye-ni i
     3PL. 3PL.SM PST3 see-DU.RCM vowel echo
     They saw each other.

KS: Is it correct to say that this sentence can only refer to a situation where there are just two individuals?

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

23a) Sol à lìa ene Alis kòŋ zhii tu.
    Sol C1.3SG.SM say 3SG.SP.INTRO Alice love C1a.3SG.POSS.PRN head

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Sol says that Alice loves herself.

KS: This looks like yet another strategy, insofar as naatu seems to treat the tu as either an affix or an incorporated noun. Below in (25b) this verb is also possible with zhii tu as the object. Is there a reason for choosing the incorporation strategy over the zhii tu strategy? In both (25b) and (27b) you mark these as ? - why do you find you use these forms?

FN: Maybe it is another strategy. The verb nàatu – ‘praise oneself’ has the body part tu – ‘head’ affixed the verb “raise”. When ‘body’ is affixed to the same verb, it becomes ‘be proud’. I can list a series of verbs whereby body parts are affixed to some root to obtain other meanings. I use the forms in 25b and 27b because nàa means praise but it is more appropriate to use nàatu for praise onself.

2.2 Ordinary (potentially independent) pronouns

Even if pronouns are never used as reflexives, we want to apply the tests of this questionnaire to them as well, since knowing what is not possible is also useful to us. Please test them now in all the local environments, even if they fail, unless you have already named them as a strategy because they succeed in local coreference environments. For this section, please translate all the sentences, indicating the acceptability of the results.

2.2.1 First, show that the pronouns can be independent by using them in a sentence where they do not have an antecedent. In the paradigms below, for example, the first sentence provides a context, and, for A10a,b the pronoun appears in the second sentence without an antecedent in that sentence, but referring to Abraham. The same test is made with first and second person pronouns in (A10c). If it is more convenient for you to construct your own sentences, feel free to do so.
30a) E ke zhe baa āmsòŋp.  
E ke zhe baa ā-m-sòŋ.  
3SG ASP.HAB. eat fufu ASSO-C6-teeth  
He eats fufu without stew.

30b) Mè mú de’ wèr Abràham nępkùr. E mú ye Lela.  
1SG. PST2 speak ASSO Abraham yesterday. 3SG. PST2 see Lela.  
I spoke with Abraham yesterday. He saw Lela.

31a) M be fu dü ntaa àyánse.  
1SG. FUT2 go market tomorrow.  
I will go to the market tomorrow.

31b) Abràham yù? M’ ba ye ye āmu’ ntaa.  
Abraham be where? 1SG. PST1 see 3SG.OBJ LOC market.  
Where is Abraham? I saw him in the market.

32a) Wè mú ye bii ka’ njok’e?  
2SG. PST2 see dance NEG Q.  
Why did you not watch the dance?

32b) Wèr à ba ye wè. Wè ba ye mè/ wèr a?  
1PL 1PL.SM PST1 see 2SG. 2SG. PST1 see 1SG/1PL Q  
We saw you. Did you see me/us?

Comment: Limbum pronouns are independent.

2.2.2 If your language has more than one type of pronouns (e.g., null, clitic and non-clitic pronouns, strong, or stressable pronouns, etc.), list each type with examples. It is helpful for us to have full paradigms for subject, object and indirect object pronouns (only if indirect object pronouns are different from object pronouns) as well as possessive pronouns and pronouns in prepositional phrases. Keep in mind that pronouns and agreement are not always easy to distinguish when the pronoun is mixed in with the verb morphology. Some languages will have an agreement morpheme that can cooccur with a pronoun in subject or object position, and in some cases the pronoun (or any full noun phrase) and the agreement are mutually exclusive. Please inform us as to the situation in your language for each argument position (subject, object, indirect object, possessive, prepositional object...)

33) Personal Pronouns

1SG ṭì, ‘mè I/me  
2SG à, wè you  
3SG e, ye she/he/her/him  
1PL wèr we/us  
2PL wèe you  
3PL Woowèe, a they/them  
DU sò us  
DU.PL EXCL wèr ye – me + him (excl you) wèe ye – you + him (excl. me)  
1PL INCL sèe – us (excl them)  
1PL.EXCL Complex form: wèr woowèe – us (excl. you) + them  
1PL.INCL Complex form: sèe woowèe – us + them  
2PL Complex form: wèe woowèe – you (pl excl me) + them

Cliticization of Speech Introducers

33a) Mè laa menè ṭì be no ba mdip.  
Mè laa me-nè ṭì be no ba mdip.  
1SG. say 1SG-SP.INTRO 1SG.ANA FUT1 drink FOC. water.  
I said that I will drink water instead.

33b) Wè laa wene à be no mru’ le?  
Wè laa wè-ne à be no mru’ le?
2SG say 2SG-SP.INTRO 2SG.ANA  FUT1 drink wine Q.
Did you say that you want to drink wine?

33c) Woowèe a laa ané a be no mrù'.
Woowèe a laa a-nè a be no mrù'.
3PL 3PL.SM say 3PL-SP.INTRO 3PL.ANA  FUT1 drink wine
They said that they [themselves] will drink wine.

Cliticization of Conjunction/Complementizers

33d) Wèr woowèe à mh sèesi wern wèr be dù wèr
Wèr woowèe à mh sèesi wer-ne wèr be dù wèr
1PL EXCL 1PL.SM PST3 arrange 1PL.COMP 2PL FUT1 go hunt.
We (+them) arranged that we (+them) will go on a hunt.

33e) Wèr woowèe à mh sèesi wern woowèe a vu.
Wèr woowèe à mh sèesi wer-ne woowèe a vu.
1PL EXCL 1PL.SM. PST3 arrange 1PL.COMP 3PL FUT1 3PL.SM come.
We (+them) arranged that they should come.

KS: Unless it is in your grammar, which I will have to go back and consult, what do you take to be the difference between speech introducers and complementizers?

Cliticization of of WH-questions

33f) M be gèe meke ègho
M be gèe me-ke ègho
1SG. FUT1 do 1SG-Q ASSO.
What will I do with it?

33g) E mʉ bipshi, wë laa wëke
E mʉ bipshi, wë laa we-ke
3SG PST2 ask 2SG say 2SG-Q.
When he asked you, what did you say?

KS: Is the word corresponding to ‘what’ the last one, and if so, is it correct that it agrees with the subject of ‘say’?

Possessive marking with tones on pronouns

1SG. më
2SG wë
3SG yë
1PL wër,
2PL wee
3PL wáp
Dual. só
PL INCL sëë

34) E cu sè’ni mbe yë ndàp
1SG live now PREP 3SG.TON.POSS house.
He is now living in his house.

Possessive pronoun

1SG. Singular forms: yàa, rlaa, yaa – mine
Plural forms: bwaa, mmàa, yaa - mine
2SG. Singular forms: rlo, yòo - your
Plural forms: yoo, bwoo, mmoo - your
2PL. Singular forms: yèe, , rlee – your
Plural forms: yee, yée, mmeë, bweë – your
3SG. Singular forms: rlìi, zhìi – his/her/it
Plural forms: bvîi, mmîi, zhíi – his/her/it
3PL. Singular forms: yàp, rlap - their
Plural forms: yap, bwap, mmap - their
Singular forms: rlisò, zhìsò – our
Plural forms: bvisò, zhisò, mmisò – our

35) Rlisèe rli yu be nduŋ
C5.SG.INCL Singular forms: rlisèe, zhìsèe – our
Plural forms: bvisèe, zhisèe, mmisèe – our

Ours is on the ceiling.

Possessive Adjectives

<table>
<thead>
<tr>
<th>Person</th>
<th>1SG.</th>
<th>2SG.</th>
<th>1+ 2SG</th>
<th>3SG.</th>
<th>1PL.</th>
<th>2PL.</th>
<th>3PL.</th>
<th>1 + 2.PL</th>
</tr>
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<tbody>
<tr>
<td>Class 1a</td>
<td>yàa</td>
<td>yòo</td>
<td>zhìsò</td>
<td>zhìi</td>
<td>yèr</td>
<td>yèe</td>
<td>yèp</td>
<td>zhìsèe</td>
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<tr>
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<td>waa</td>
<td>woo</td>
<td>visò</td>
<td>vi</td>
<td>wer</td>
<td>wee</td>
<td>wap</td>
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<tr>
<td>Class 5</td>
<td>la</td>
<td>lo</td>
<td>lisò</td>
<td>li</td>
<td>ler</td>
<td>lee</td>
<td>lap</td>
<td>lisèe</td>
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<tr>
<td>Class 6</td>
<td>ma</td>
<td>mo</td>
<td>misò</td>
<td>mi</td>
<td>mer</td>
<td>mee</td>
<td>map</td>
<td>misèe</td>
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<tr>
<td>Class 7/7a</td>
<td>yàa</td>
<td>yòo</td>
<td>zhìsò</td>
<td>zhìi</td>
<td>yèr</td>
<td>yèe</td>
<td>yèp</td>
<td>zhìsèe</td>
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<tr>
<td>Class 10</td>
<td>yaa</td>
<td>yoo</td>
<td>zhisò</td>
<td>zhii</td>
<td>yer</td>
<td>yee</td>
<td>yap</td>
<td>zhisèe</td>
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Possessive focused adjectives

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<tr>
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<th>1SG.</th>
<th>2SG.</th>
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<th>1PL.</th>
<th>2PL.</th>
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<th>1 + 2.PL</th>
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<td>Class 1a</td>
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<td>yòo</td>
<td>zhìsò</td>
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<td>yèr</td>
<td>yèe</td>
<td>yèp</td>
<td>zhìsèe</td>
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<td>wèè</td>
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<tr>
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<td>bwo</td>
<td>lvisò</td>
<td>bvi</td>
<td>bwer</td>
<td>bwee</td>
<td>bwap</td>
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<tr>
<td>Class 5</td>
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<td>llo</td>
<td>rlisò</td>
<td>rli</td>
<td>rler</td>
<td>rlee</td>
<td>rlap</td>
<td>rlisèe</td>
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<tr>
<td>Class 6</td>
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<td>mmo</td>
<td>mmisò</td>
<td>mmi</td>
<td>mmee</td>
<td>mmap</td>
<td>mmisèe</td>
<td></td>
</tr>
<tr>
<td>Class 7a</td>
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<td>zhii</td>
<td>yer</td>
<td>yee</td>
<td>yap</td>
<td>zhisèe</td>
</tr>
<tr>
<td>Class 10</td>
<td>yaa</td>
<td>yoo</td>
<td>zhisò</td>
<td>zhii</td>
<td>yer</td>
<td>yee</td>
<td>yap</td>
<td>zhisèe</td>
</tr>
</tbody>
</table>

36) E lôr yaa ṅwà’.
35G take C1.1SG.POSS.PRN book
He has taken my book (offered)

37) E lôr ṅwà’ yaa
35G take book C1.1SG.POSS.FOC.ADJ
He has taken my book (personal)

2.2.3 Null arguments - If your language allows argument drop (null pronouns, or pro-drop) as a pronominalization strategy in simple (single clause) sentences, then name it here as an additional pronominalization option. This kind of argument drop does not have to be interpreted as reflexive (as in the case of English John washed), but rather it is the sort of argument drop that could be used where there is not necessarily an antecedent in the sentence, but the interpretation is like that of an independent pronoun. Provide an examples for each grammatical function that can be dropped. In Japanese, for example, null arguments are possible for both subject and object arguments, but none of the examples in (A10e-f) are possible in English. If your language allows the pronouns to drop for any of these grammatical functions (subject, object, prepositional object), but the range of pronominal interpretations is limited, please comment. (If agreement plays a role with respect to when a pronoun can be missing, please say so, even though your answer to this may overlap with your answer to 2.2.2.)

38) Pro-drop with rising tone.

38a) E fà mè nò
35G give 1SG drink
He gave me (and) I drank (it)

38b) E nòpsì à zhè
35G keep 2SG eat
If he keeps (it) eat (it).

KS: Where is 2sg in the translation? Is it ‘If he keeps it, you eat it?’
39) Pro-drop with low tone

39a) A ka’ koo à be’ti.
2SG COND take 2SG turn upside down
If you take (it), turn (it) upside down.

KS: Is it correct to say that this is a conditional followed by an imperative?

39b) À ka’ koo à baabà.
2SG COND take 2SG carry on the back
If you take (it), carry (it) on your back.

40) Pro-drop with vowel echo

40a) Hal à lip i
Hal C1.3SG.SM hit vowel echo
Hal hit (it).

40b) Hal à bu’ u.
Hal C1.3SG.SM break vowel echo
Hal has broken (it)

If your language does not allow null arguments, then just translate these sentences, star them, and move on.

2.2.4 The use of otherwise independent pronouns for clausemate anaphora

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

41) Ali à m nàa ye.
Ali C1.3SG.SM PST3 praise 3SG.OBJ
Ali praised him. (him is not Ali)

42) Ali à m kòŋ ye.
Ali C1.3SG.SM PST3 like 3SG.OBJ
Ali liked him. (him is not Ali)

43) Ali à m ye ye.
Ali C1.3SG.SM PST3 see 3SG.OBJ
Ali saw him. (him is not Ali)

44) Ali à m lâa nè ye.
Ali C1.3SG.SM PST3 talk PREP 3SG.OBJ
Ali talked to him. (him is not Ali)

45) Ali à m tuusi ñwà’ nè ye
Ali C1.3SG.SM PST3 send book PREP 3SG.OBJ
Ali sent a book to him. (him is not Ali)

46) Ali à m já’ ye.
Ali C1.3SG.SM PST3 help 3SG.OBJ
Ali helped him. (him is not Ali)

47) Ali à m bu’ ye.
Ali C1.3SG.SM PST3 surprise 3SG.OBJ
Ali surprised him. (him is not Ali)

48) Ali à m yuu ye ñwà’
Ali C1.3SG.SM PST3 buy 3SG.OBJ book
Ali bought a book for him. (him is not Ali)

49) Ali à ṭè bè’ ṣwà’ əmbò ye.
Ali C1.3SG.SM PST3 read book PREP 3SG.OBJ
Ali read a book about him (him is not Ali)

50a) Ali à ṭè ye ṣwà’ əgèe ye.
Ali C1.3SG.SM PST3 see book LOC 3SG.OBJ
Ali found a book near him. (him is not Ali)

50b) Ali à ṭè ye ṣwà’ a ɣè gep.
Ali C1.3SG.SM PST3 see book PREP 3SG.OBJ.POSS LOC

In English, none of (A10g-n) are acceptable if him = Ali, rather all speakers find that him must refer to someone other than Ali. Most English speakers, though not all, accept (A10l, m) with him = Ali. Try to use verbs close to these and use pronouns corresponding to the direct object (or object markers, if that is what your language uses for direct object pronouns) and determine if the pronoun you use can form a reflexive reading (=Ali) or not in these cases or not. It is especially important to keep in mind that we also need translated examples that show what is not possible, when that is the case.

2.3 Reciprocal Readings
The previous sections asked about strategies for reflexive coreference. We now consider reciprocals. Please keep in mind that we are still just compiling an inventory of strategies and we shall explore details later. As before, remember to treat "optional" morphemes as evidence of distinct strategies.

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

51) Jôn ba Pità a ce cepni.
John CONJ Peter 3PL.SM ASP.CONT insult-DU.RCM.
John and Peter are insulting each other.

KS: Is the 'one-CONJ-one' strategy possible here? Is it possible with a preceding preposition in addition to -ni on the verb?
FN: The 'one-CONJ-one' strategy is possible only when the subjects are more than two. It is not possible with a preceding preposition in addition to the verb suffixes.

2.3.2 As a means of assessing what sorts of reciprocal strategies your language contains, consider these typical sorts of reciprocal sentences in English. If a new strategy is involved (a special reciprocal form, or affix, or clitic or argument drop, or verb form, etc.), name it and give an example. (For argument drop, consider English They argued, which can be understood to mean that ‘they argued with each other’).

52) Byèŋe anà a ke yèni.
Byèŋe anà a ke ye-ni.
Women ANA.DET 3PL.SM ASP.HAB see-DU.RCM
The women see each other.

53) Boombaŋrù a ṭè sù’si mò’ ba mò’.
Boo-ambaŋrù a ṭè sù’si mò’ ba mò’.
Children-male 3PL.SM PST3 wash one CONJ one
The boys washed each other.

Comment: This example could be formulated with the –ni strategy only if the the subject is understood to be two boys.

54) Mmbaŋrù a ṭè shà’ tu ese mò’ ba mò’.
M-ambaŋrù a ṭè shà’ tu ese mò’ ba mò’.
C6-Men 3PL.SM PST3 comb head PREP one CONJ one
The men combed each other's hair.

KS: If you were to use the -ni strategy here could you omit ese...mò’? Could they be used together?
FN: Yes! They cannot be used together with this verb, but with others they can.

55) A mû seni.
They argued with each other.

56) Boomba ŋrù a ṭi tani.
Boo-mba ŋrù a ṭi ta-ni.
Children-male 3PL.SM PST3 kick-DU.RCM
The boys kicked each other.

57) A bàni i.
A bà-ṇi i.
3PL hate-DU.RCM. vowel echo
They hate each other.

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

58) Mmba ŋrù a ṭi dùnši Bil nè mò’ ba mò’
Males 3PL.SM PST3 introduce Bill PREP one CONJ one
The men introduced Bill to each other.

59) Êgàrjér a ce de’ e.
Êgà-rjér a ce de’ e.
People-travel 3PL.SM ASP.CONT talk vowel echo
The travelers spoke to each other.

KS: This appears to be an inherently reciprocal verb which requires no reciprocal marking. Would you agree with that assessment?
FN. I agree that it is an inherently reciprocal verb, which does not require reciprocal marking.

60) Êjwèrfe’shi à yu’ši bìkifèr ese mò’ ba mò’.
Êjwè-rfe’shi à yu’ši bìkifèr ese mò’ ba mò’.
Person-preach C1.3SG.SM listen-PLU C2-stories PREP one CONJ one
The priests heard stories about each other.

61) A nògsi bòkè kùntombì mò’ ba mò’.
A nògs-si bòkè kùntombì mò’ ba mò’.
3PL keep-CAUS C2-presents LOC one CONJ one
They left presents in front of each other.

Also consider other verbs that have unusual argument structures in your language.

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.

62) Wèr à mḥ yèni
Wèr à mḥ ye-ni
1PL 1PL.SM PST2 see-DU.RCM
We saw each other.

63) Wèe tür à rjà’se mnyor.
Wèe tür à r-rjà’se mnyor.
2PL have INF INF-help-PLU.RCM C6-bodies
You (PL.) must help each other.

Comment: The –ni (Dual Subj) / “one CONJ one” strategy can be used here but the “bodies” will be excluded. The body strategy is preferred because of the physical action involved. If we add a POSS. ADJ here, we may have to delete the –se suffix and the reading will become reflexive rather than reciprocal.

KS: Please provide sentences for all the variants you describe. This is very interesting.
64) Sèe be sù’si bvisèe mnyor.
Sèe be sù’si bvisèe m-nyor.
1PL.INCL FUT1 wash C2-1PL.INCL.POSS.PRN C6-bodies
We will wash ourselves.

65) Woowèe a ke kù jàani.
Woowèe a ke-kù jàa-ni.
3PL 3PL.M SM ASP.HAB criticize-DU.RCM
They always criticize each other.

66) Ku’ boombaŋrù a m ce tani.
Ku’ boob-me-baŋrù a m ce ta-ni.
ADJ children-male 3PL.M SM PST3 ASP.CONT kick-DU.RCM
Many boys kicked each other.

2.3.5 Other clause types, and other strategies: Briefly consider various types of reciprocal embedded clauses; if a new coreference strategy can be used with some of them, name it here. Also consider if there may be a reciprocal strategy not identified by the preceding questions. Use the following sentences as models, but if there is nothing new to be found this way, do not bother to translate them and move on.

A14a) Sôl à làa ene boobyenge a konɔni i.
Sôl à làa e-ne boobyenge a kon-ɔni i.
Sol C1.3SG.SM say 3SG.SP.INTRO girls 3PL.SM love-DU.RCM vowel echo
Sol says that the girls love each other.

b) Sôl à m tâ’ ene boobyenge a ce naani
Sôl à m tâ’e-ne boobyenge a ce naa-ni
Sol C1.3SG.SM PST3 require 3SG.COMP girls 3PL.SM ASP.CONT praise-DU.RCM
Sol required that the girls praise each other.

c) Sôl à m kwà’ ene boobyenge a ba ce naani
Sôl à m kwà’e-ne boobyenge a ba ce naa-ni
Sol C1.3SG.SM PST3 require3SG.COMP girls 3PL.SM MOD ASP.CONT praise-DU.RCM
Sol thought the girls should praise each other.

d) Sôl à m lâa nè boobyenge ene a ce naani
Sôl à m lâa nè boobyenge e-ne a ce naa-ni
Sol C1.3SG.SM PST3 say PREP girls 3SG.SP.INTRO 3PL ASP.CONT praise-DU.RCM
Sol asked the girls to praise each other.

e) Boobyenge a ce ròo à rââni.
Boobyenge a ce ròo à rââ-ni.
Girls 3PL.SM ASP.CONT want INF. INF-praise-DU.RCM
The girls want to praise each other.

KS: Is this sentence possible if we add mnyor to the end of it, or would it just sound redundant or emphatic? What about if we added ‘(their) heads’?

ii) Boobyenge a ce ròo à rââse mnyor
Boobyenge a ce ròo à rââ-se m-nyor
Girls 3PL.SM ASP.CONT want INF. INF-praise-PLU.RCM C6-bodies
The girls want to praise each other.

KS: Isn’t ‘praise’ a verb that takes a simple reflexive with the ‘head’ body part? When the RCM.pl affix is used, does it require the ‘bodies’ form to get the ‘praise each other’ reading?

f) Sôl ce kê’ ene boobyenge a naani
Sôl ce kê’e ne boobyenge a naa-ni
Sol ASP.CONT expects 3SG.COMP girls 3PL.SM praise-DU.RCM
Sol expects the girls to praise each other.
2.4 Other types of local coreference

Possessives, alienable and inalienable - Please translate these sentences and provide the best gloss that you can. Is one of the strategies described above used?

67a) Pôl à bʉsì blaba’.
Pôl à bu-sì b-laba’.
Paul C1.3SG.SM lost-CAUS C2-shoes
Paul lost his shoes.

67bi) Pôl à bʉsì bvi blaba’
Pôl à bu-sì bvi b-laba’
Paul C1.3SG.SM lost-CAUS C2.3SG.POSS.PRN C2-shoes
Paul lost his (another’s/ allocated Paul’s) shoes.

67bii) Pôl à bʉsì blaba’ bvi
Pôl à bʉsì b-laba’ bvi
Paul C1.3SG.SM lost-CAUS C2-shoes C2.3SG.POSS.FOC.ADJ
Paul lost his (Paul’s) shoes.

68) Pôl à ba naa bo.
Paul C1.3SG.SM PST1 raise hand
Paul raised his hand. (e.g., in class)

69) Pôl à sɛɛ bo
Paul C1.3SG.SM cut hand
Paul cut his hand. (e.g., accidentally)

70a) Pôl à m̀fyɛ’shi bo.
Paul C1.3SG.SM PST3 examine hand
Paul examined his hand.

70b) Pôl à m̀fyɛ’shi bo zhii
Paul C1.3SG.SM PST3 examine hand C1a.3SG.POSS.FOC.ADJ
Paul examined his hand.

71a) Pôl à tee ntukùu.
Paul C1.3SG.SM cut toe
Paul stubbed his toe.

71b) Pôl à tee ntukùu zhii.
Paul C1.3SG.SM cut toe C1a.3SG.POSS.FOC.ADJ
Paul stubbed his toe.

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

A16) Ntee zhi m̀ yanį Mɛrį nè nkurunte Andrù.
Heart C1a.3SG.SM PST3 pain Mary PREP self-confidence Andrew
Andrew’s self-confidence annoyed Mary.

A17a) Andrù à suŋ rli rlii, cicà à yu’ rboń
Andrew C1.3SG.SM tell C5.3SG.POSS.PRN name teacher C1.3SG.SM feel fine.

Andrew’s introduction of himself impressed the teacher.

Andrew’s evaluation of himself was too critical.

Their instructions to each other were not clear.

Their evaluations of each other were too generous.

Comments: Limbum does not have any reflexives or reciprocals in nominals.

KS: Please give me an idea with examples of how these meanings would be gotten across.

FN: Actually it was necessary. With these, the distinction between ‘one CONJ one’, the POSS.PRN and body parts becomes clearer. But it is not yet clear to me why some verbs may prefer the –se suffix for plurality of more than three whereas others take the "one CONJ one" strategy. Empirical work needed for this.

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

A. Reference to relative subject of the antecedent and not the antecedent itself
This is a discourse anaphoric effect, which I will not pursue further here.

B. Reference to part and not the whole antecedent (bound pronoun)
Examples as with complex forms: see (33d) and ((33e) above

C. Reference to indefinite Subjects.
This also has to do with discourse anaphora.

2.4.4 It would be useful to us if you could provide a list of the different strategies so we are both clear as to which ones you distinguish. This you may revise on the basis of new ones you come across in filling out the form, if there are any.

Pronominal Strategies

1. Personal Pronouns
   1a. Personal Pronouns
   1b. cliticization of Speech introducers
   1c. cliticization of Conjunctions (Complementizers)
   1d. cliticization of some wh questions

2. Focal Pronouns

3. Possessive pronouns

4. Unique acquired possessive pronouns

5. Possessive adjectives

6. Possessive focused adjectives

7. Tonal possessive marking

8. Pro-drop marking
   8a. Rising tone
   8b. Low tone
   8c. Vowel echo (see below for association with ‘anaphoric determinants’)

9. Unique emphatic Pronouns
Comment: KS: Apart from the one that means ‘alone’, I wonder if we might similarly class the ones that I suggested might be like ‘with his own hand/eyes/ears’? FN: We may do so. The only difference is the emphasis. Also take note of the fact that the Unique Emphatic Pronouns do not make use of all Limbum pronoun forms (Restricted only to eight forms).

Reciprocal Strategies

1a. Zero option

1b. Reciprocal verb extensions -ni, -se, -ger and -te
1c. ‘one CONJ one’ phrase
1d. ‘ni + ‘one CONJ one’ phrase

Comment: We don’t have examples with –te and -ŋger above. See section three.

Reflexive Strategies
1. body part forms
   a. Argument type
      i. POSS.prn head
      ii. ‘POSS.prn body
   b. Adverbial type
      i. POSS.prn hand
      ii. POSS.prn eye

Comment: See notes on default marker for reflexives; where you will find that there is a mismatch with the arguments. Without the instrumental preposition and the possessive pronouns, the reading gives room for action caused by a subject, which is not the antecedent.

2. use of –ni as reflexive marker

Markers of Discourse Anaphora
Comment: These are discourse level determiners, as there are no determiners in Limbum.
Examples:

i. Êwëmọ̀ à lór yàa bacikul.
   Person-INDF C1-3SG.SM take C1-1SG.POSS.PRN bicycle.
   Some has taken my bicycle.

ii. Mè vù a ye muumò́ e cc zhe mkuu mber
   1SG come CONJ see child-INDF 3SG.ANA ASP.CONT eat C6-beans C6-raw.
   I came and saw a (certain) child eating raw beans.

Comment: These anaphoric determinants can also be realised at syntactic level as can be seen in Section for numbers E8c-d and E9b-c. Nice you insisted on seeing the examples.

Anaphoric relativisers
Comment: These also occur strictly at discourse level or intersentencially.

i. LÀ r-kọ̀j rli keptí i.
   LÀ r-kọ̀j r-li keptí i.
   C5-1SG.POSS.PRN C5-spear C5-3SG.SM break vowel echo
   My spear is broken

ii. À r-ce wè ṽè ṽuu nà a?
   À r-ce wè ṽè ṽuu nà a?
   Is C5-ANA.REL 2SG PST2 buy ANA.DET Q
   Is it the one you bought?

Comment: The class prefix of the class 5 noun of the previous sentence is attached to the relativiser to show that it is coreferring to that class 5 noun.

Part 3 General details about the strategies

You should now have a list of several different "strategies" for coreference, each represented by one or more examples. The following sections will study the properties of each of these strategies.

For each question, you should give a separate answer for each of the strategies you have identified. Be sure to clearly label each answer with the name of the strategy used (A, B, "zich", etc.). Even you feel that it is obvious which strategy is used, labeling all your answers will help us process them efficiently and avoid errors.

It may be easier for you if you complete part 3 of the questionnaire for one strategy at a time. Begin with the first strategy you have identified (Strategy A, for example), and answer all questions as they apply to it. Then return to this point and do the same with strategy B, etc. This is
just a suggestion, however. You may find it easier to go through answering for all strategies for each question. Some questions refer to "the current strategy," meaning whichever strategy you are providing an answer for at that moment. This part of the AQ is harder for those with little or no linguistic training, since we are asking you to make analytic distinctions.

### 3.1 Marking

#### 3.1.1 Marking Strategies for coconstrued interpretations

- **Ma**. Marking on a coconstrued argument. (E.g., English *himself*)
- **Mb**. Marking on the verb or an auxiliary. (French clitic *se*, the Bantu reflexive marker)
- **Mc**. Coconstrual is marked by dropping an argument. (as in English *John washed*)
- **Md**. Coconstrual is signaled by a specialized adjunct. (Such as *l’un l’autre* in Y1).

#### Reflexive Strategies

- **Aa**. Use of (POSS)+’body’ or ‘head’ (reflexive reading)

  Reflexivity is expressed in Limbum using the noun ‘body’ in the sense that the body is the object (i.e., it is an argument-marking strategy). Sometimes the body is modified by the possessive adjective that is coreferent to the subject NP. The use of the noun ‘head’ is used for reflexive readings when the event or relation is psychological rather than physical. The agreement of the possessive with the antecedent and with the body part is described in the section on agreement.

- **Ab**. Use of POSS+ body part for exclusive action (adverbial reflexive)

  The use of body parts is to mark exclusive participation of the subject in the event (KS: As in English, He did it himself, i.e. nobody helped him). This is done in a way that we have a subject, verb, object, and a body part introduced by the instrumental preposition ‘nè’ and modified by the adjectival possessive that is co-referent to the subject. These body parts are placed after the object and the choice of the body part to mark subject exclusion depends on the action. The constructions are done in such a way that the addressee is made to think that the action is carried out without any other person’s help, thereby excluding another actor in the event. [KS: I have edited this paragraph – make sure I have not misrepresented]. The default body part for expression of exclusive subject is “hand”. This means that when the verb does not determine the choice of the body part; rather ‘hand’ is used as default. [KS: I have moved multi-subject marking to the agreement section, rather than as a strategy]

- **Ac**. Unique Emphatic pronoun

  Unique emphatic pronouns mark exclusiveness in the sense that it brings about some meaning through which we understand that the subject was the sole actor. The unique emphatic pronoun contains the morpheme ‘mnji’ meaning ‘alone’. The difference with body parts involvement is the fact the focus is more on the subject than the action.

- **Ad**. Use of –ni for reflexive readings.

  This is normally the dual marker for reciprocal interpretations, but it can have a reflexive meaning if the subject denotes exactly two individuals [KS: Please confirm or revise.]

#### Strategy B.Reciprocals.

In Limbum, reciprocal meaning is expressed with the use verb extensions –ni, –s, -nger and –te. With some verbs, we have a zero option. In other instances ‘one CONJ one’ is used or the –ni suffix is used together with ‘one CONJ one’.

- **Ba**. The verb extension –ni

  Generally, -ni is used to express bifurcation or dual reciprocal meaning in Limbum. It is used to express reciprocity between two persons or parties.

- **Bb**. The verb extension –se

  The extension –se is used only with certain verbs to express reciprocity between two or more parties in a sense that the action is continues for some time. [KS: Does the use of –se with a reciprocal meaning require the presence of ‘POSS+bodies’ or is it merely compatible with it? Please provide examples where ‘POSS+bodies’ is absent (elsewhere I think you say that this is ok). If one-CONJ-one is used, is the use of –se excluded? Example please]

- **Bc**. The verb extension –te

  The extension –te is to express reciprocity between many parties. It is also restricted to some verbs. [KS: Does the use of –te with a reciprocal meaning require the presence of ‘POSS+bodies’ or is it merely compatible with it? Please provide examples where ‘POSS+bodies’ is absent and where it is present. If one-CONJ-one is used, is the use of –te excluded? Example please. Can –te ever support a simple reflexive reading? If so, please provide an example]
The verb extension -nger
The extension -nger is also used to express reciprocity between many subjects. In addition it is used to express action that has taken place repeatedly. [KS: Does the use of -nger with a reciprocal meaning require the presence of 'POSS + bodies' or is it merely compatible with it? Please provide examples where 'POSS + bodies' is absent and where it is present. If one-CONJ-one is used, is the use of -nger excluded? Example please. Can -nger ever support a simple reflexive reading? If so, please provide an example]

Be. The zero option.
With the zero reciprocity is inherent with some verbs.

Bf. One CONJ one strategy
This strategy is used to express reciprocity between many parties as well as serial reciprocal actions that takes place between two parties when the 'one CONJ one' is used alongside the –ni verb extension. [KS: Is this strategy ever sufficient to form a reciprocal interpretation when there is no special affix on the verb?]

3.2 Productivity

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

A strategy is "extremely productive" if it can be applied to nearly every verb you can think of. It is "fairly productive" if there are many exceptions, but you could still find a potentially unlimited number of verbs that allow it. (Could you name twenty verbs that allow it without too much difficulty?). One way of testing for productivity you might try is to see if the current strategy can be used for verbs that are formed in a productive way from other categories. For example, English -ize is added to nouns to make verbs, and all of the verbs formed in this way in English use the x-SELF strategy. If this works, then the strategy in question is productive.

A strategy is not productive if it can only be used for a small set of verbs and cannot normally be extended to newly formed verbs. For example, the null object strategy for reflexive interpretation in English is not productive because it applies to a small set of verbs (wash, shave, dress, bathe…) and not generally (*John killed, *John praised, *John promoted, none with reflexive meaning) and does not easily extend to similar forms, e.g., *John cleaned.

Aa. Use of the noun body as object
   - Not productive

Abi. Use of body parts
FN: The default body part ‘hand’ takes direct arguments and as well it does not. [Please give an example where ‘hand’ takes a direct argument antecedent to form a reflexive reading. The body part ‘foot’ always takes an adjunct usage. With body parts ear, nose, eye and mouth the arguments are optional. But the body part ‘head’, always takes a direct argument.

A. Reflexives.
Hand – Extremely productive
Foot – Not productive
Nose - Not productive
Ear – Not productive
Eye – Not productive
Mouth – Not productive
Head – Fairly productive

Ad. Unique Emphatic pronoun
   - Extremely Productive

B. Reciprocals
   The verb extension –ni Fairly productive
   The verb extension –se. Not productive
   The verb extension –te Not productive
   The verb extension -nger Not productive
   The zero option. Not productive
   One CONJ one strategy Not productive

The extension –te mostly takes adjuncts, -nger does not take a direct argument whereas the rest inherently do.
3.2.2 Is the use of this strategy lexically restricted to certain verb classes, or is it unrestricted (applies across all verb classes)?

A strategy is "restricted to a specific class" if you are aware of some class of verbs which are the only ones, or nearly the only ones, that allow its use. If the strategy is restricted in its use, please describe, if you can, what you think the restriction is. Please give a few examples where it is possible to use it, and a few examples where it is not possible to use it. (e.g., "used only with verbs of motion"). Use the following scale: (a) Has (almost) no exceptions, (b) Has few exceptions, (c) Is only a general tendency, (d) Can't tell.

A. Reflexives

Aa. Use of the noun body as object

The use of the noun body as an object to express reflexivity is restricted to a few verbs like wash, see and look especially as the reference is made to the whole physique of the subject e.g.

Aai) Jôn à sù'si nyor.
    John 1.3SG.SM wash body
    John has washed himself.

Aa(ii) Jôn à fye’ zhii nyor nje rcerlir.
    Jôn à fye’ zhii nyor nje r-rcerlir.
    John 1.3SG.SM look 1a.3SG.POSS.PRN body PREP 5-mirror.
    John looked at himself in the mirror.

Comment: The strategy changes and is restricted to mental activities when the body part ‘head’ is used e.g.

Aa(iii) Jôn ce fa ng’è nè zhii tu.
    John ASP.CONT give troublePREP 1.3SG.POSS.PRN head.
    John is troubling himself.

Abi. Use of body parts nose

Abia) The strategy of using the body part ‘nose is restricted to verbs like smell e.g

E rùusi nè zhii nyènyu.
    1SG smell PREP 1a.3SG.POSS.PRN nose.
    He has smelt (it) himself.

Abib) The strategy of using the body part ‘eye’ is restricted to verbs like see, watch and look. The context also determines this usage.

E ye nyàa anà nè li rlr.
    3Sg see animal Ana.DET PREP 5.3SG.POSS.PRN eye
    He has seen the animal himself.

Abic) The strategy of using the body part ‘mouth’ is restricted to verbs like eat, drink and taste e.g.

Mè yu’shi nè yaa cuá.
    1SG. taste PREP 1a.1SG..POSS.PRN mouth.
    I tasted (it) myself.

Abid) The strategy of using the body part ‘foot’ is restricted to verbs like travel and go.

Woowèe a m dù mboo nè map m-kùu.
Woowèe a m dù mboo nè map m-kuu.
    3PL 3PL.SM PST3 go LOC PREP 6.3PL.POSS.PRN C6-feet
    They went there themselves.

Abie) The strategy of using the body part ‘ear’ is restricted to verbs like hear and listen e.g

Wè m yu’ nè yoo tù’ a?
    2SG PST3 hear PREP 1a.2SG.POSS.PRN ear Q
    Did you hear (it) yourself?

Abid) Body part ‘hand’ involves verbs denoting manual work and is also the default reflexive strategy for every non human subjects.
He ploughed the farm himself.

The has bird fallen by itself.

The unique emphatic pronoun can be extremely productive but it is restricted human subjects. The context also determines the reflexive meaning attached to the morpheme ‘mnj’, which characterizes this strategy. Moreover, the use of the unique Emphatic pronoun is restricted only to eight possessive forms, which refer to the subjects.

He ploughed the farm himself / alone.

You will go there yourself / alone.

The horse ran alone/ by itself.

The verb extension –ni has a few exceptions e.g.

We have separated with each other.

They were kicking each other.

They are embracing each other.

The cars are bypassing each other.

They met at the market.
We closed each other’s hands.

Bd. The verb extension –nger

The verb extension –nger is restricted to a few verbs but can tell.

Mntaaŋguu bvi ce ki недо e
M-ntaaŋguu bvi ce kiu-nger e

C6-sticks C6-3PL.SM ASP.CONT knock-RECIP vowel echo

The sticks are knocking each other.

Be. The zero option.

The zero option has been observed only with the verb ‘talk’

Jôn a Piṭa a ce de’e.

John CONJ Peter 3PL.SM ASP.CONT talk vowel echo

John and Peter are talking to each other/discussing.

Bf. ‘One CONJ one’ strategy

Comment: This strategy is used both where a verb extension can be used and also when it is not. But it is restricted to few verbs, which I can’t tell.

Woowée a ce kooshi mó’ ba mó’.
3PL 3PL.SM ASP.CONT scratch one CONJ one

They are scratching each other.

Wèr à m tani mó’ ba mó’.
Wèr à m ta-ni mó’ ba mó’.

1PL 1PL.SM PST3 kick-RECIP one CONJ one

We (many) kicked each other.

3.3 Context of Use

3.3.1 How marked or natural is this strategy? For example, is this strategy typical of a particular social style or literary style, or does it sound old-fashioned? Is it considered formal or casual or is it used in any of these contexts? Is it the way people talk to each other in ‘normal’ contexts?

Comment: Strategies A. Reflexives and B. Reciprocals are used in normal contexts.

3.3.2 Is special intonation or emphasis necessary, and if so, where (e.g., is it on the morpheme that constitutes the marker for the strategy or is it a contour on the verb, or perhaps a special contour for the whole sentence)?

A. Reflexives

With this strategy, there is no special intonation. Emphasis can be done by adding the particle ‘mbàa’, (which can be difficult to translate) at the sentence final position.

B. Reciprocals

Use for emphasis. It should be noted that the ‘one CONJ one’ strategy is used alongside the verbal extensions for both clarity and emphasis.

[KS: This is something I want to come back to at some point, examining the difference between clarity and emphasis by searching for contexts where answering with or without the ‘one CONJ one’ is unacceptable. If you have thoughts about it now, that’s fine, but it’s a lower priority just now]

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

B1a) If Marsha admires just one person, then I suspect that she admires just HER.

b) Marsha thinks I should trust no one but herSELF.
A. Reflexives
The discourse context whereby the object form is different is when reference is being made to and indefinite subject/object for first time. The example of B1a) is apt as the ‘one person’ - ṣwèmò will further be referred to as ṣgà – ‘her/him’ such that the object form ye is the object form that is used when reference is made to definite subjects.

B. Reciprocals
There is a pragmatic context of usage whereby an object pronoun follows the verb with a –reciprocal verb extension. That is mostly done in request such that the pronoun, which follows the verb refers to the beneficiary or patient of the request e.g.

M be teni wè ọwàrọ ọ a?
M be te-ni wè ọwàrọ ọ a
1SG FUT1 cut-DU.RECIP 2SG cane sugar Q
Should I share the cane sugar between you and I?

Teni mè ọwàrọ
Te-ni mè ọwàrọ
Cut-DU.RECIP 1SG cane sugar
Share the cane sugar with me.

3.4 Morphology

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

A. Reflexives
The adverbial reflexive elements consist of instrumental preposition -nè, pronoun and body parts e.g. ‘with her/his head’, “with her/his hand’ etc. The unique emphatic pronoun has the morpheme mnji – ‘alone’ which consist of ‘his/her alone’ etc. All of the body parts used are nouns that are used in non-anaphoric expressions.

B. Reciprocals
Reciprocals with the verb extensions have stateable morpheme translations except for the –te whose meaning with the verb of cut is extended to ‘another and then the other’

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

A. Reflexives
With Limbum use of body parts for adverbial reflexives, an instrumental prepositional phrase introduces possessor + body part. With the unique emphatic pronoun mnji is not an ordinary noun that can be a possessor of the pronoun.

B. Reciprocals
The verb extensions that contribute to reciprocal interpretations are not used for reciprocal meanings when the verbs denote action that involves movement from one location to the other. This can be observed with the –ni and –se suffixes e.g.

Woowèè a ce cañni
Woowèè a ce cañ-ni
3PL 3PL.SM ASP.CONT run-DU.RECIP
They are running.

Woowèè a ce du-se
Woowèè a ce du-se
3PL 3PL.SM ASP.CONT go-PLU.RECIP
They are going away.

3.4.3 If the reflexive element has clear syntactic and part-of-speech sub-structure show it here.

Agreement features etc.

A. Reflexives:
Hand nè yaa bo nè map mm-bo
PREP C1a.1SG.POSS.PRN hand PREP C6-1SG.POSS.PRN C6-hands

myself

myself
Comment: Plural agreement with body part ‘hand’ is done for emphasis when reference it made to a single subject. Plural marking is also accepted when reference is made to multiple subjects. This system is applied to all double body parts.

Unique emphatic pronouns
Ma-mnji'
1SG.UNLEMP.PRO
I alone
Mo-mnji’
2SG. UNLEMP.PRO
You alone

The unique emphatic pronouns only agree with the persons.

Head nè yaa tu nè wer b-tu
PREP 1SG.1PL.POSS.PRN head PREP 2-1PL.POSS.PRN C2-hands
myself Ourselves

Comment: Since an individual cannot have many heads, plural agreement with head is done for multiple subjects. The same system can be applied to other single body parts. Wer is always used as a class 2 possessive pronoun but the meaning changes when it precedes or follows the object noun; possessive adjective and possessive focused adjective respectively. Tu is sub-class 1a noun which selects class 2 for plural marking.

B. Reciprocal
Dual Reciprocity
Jôn a Pità a ce tani
Jôn a Pità a ce ta-ni
John CONJ Peter 3PL.SM ASP.CONT kick-DU.RECIP
John and Peter are kicking each other.

Plural reciprocity
Jôn, Pità, Sara ba Jrn a ce tani mò ba mò’
Jôn, Pità, Sara ba Jrn a ce ta-ni mò ba mò’
John, Peter, Sara CONJ Jane 3PL.SM ASP.CONT kick-DU.RECIP one CONJ one
John, Peter, Sara and Jane are kicking each other.

Comment: Here, it can be seen that there is no real agreement pattern. The ‘one CONJ one’ strategy is used to mark agreement with plural of more than two subjects. This can be done with the other verb extensions as well but the –se and –nger agree only with plural subjects.

KS: Here the subject is not dual, but the dual reciprocal marker is used. Is the ‘dualness’ a function of whether or not the objects are each in a dual opposition, that is to say, is it true for any pair fashioned from the four subject participants, that each pair is in a mutual kicking relationship, or is there just a lot of kicking going on amongst those participants, though one of them may not have kicked back everyone who kicked him or her? Is this sentence bad without ‘one CONJ one’?

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

A. Reflexives

The nè preposition for adverbial reflexives is used both as benefactive and instrumental preposition. Yaa – ‘mine/my’ is always used as a class 1a possessive pronoun but the meaning changes when it precedes or follows the object noun; possessive adjective and possessive focused adjective respectively. Wer – ‘ours/our’ is always used as a class 2 possessive pronoun but the meaning changes when it precedes or follows the object noun; possessive adjective and possessive focused adjective respectively. Bo – ‘hand’ is sub-class 1a noun, which selects class 6 for plural marking Tu – ‘head’ is also a sub-class 1a noun, which selects class 2 for plural marking.

With the Unique emphatic pronoun, mnji – ‘alone’ is a bound morpheme.

B. Reciprocals

The various reciprocal morphemes are related to lexical contentful morphemes. –ni which generally has a meaning of ‘into two’ expresses dual reciprocity. -te and -nger which have serial action meaning is used reciprocally when referring to mass bodies (subjects) such that the meaning is close to ‘against the other’. On the other hand, -se has a serial meaning which is close to ‘one after the other’. The ‘one CONJ one’ means ‘one another’

[KS: We will return to these distinctions when we examine the range of possible reciprocal readings]
### 3.5 The agreement paradigm

3.5.1 Give the morphological paradigm of each reflexive strategy.

Multi-subject marking occurs when there is agreement with the subject through the use of persons and number of the possessives preceding the body part. This is done in the way that when the subject is plural, there is plural agreement with the number of the body part as well as the possessive adjective. See examples (8a), (A7d), (13c) and (13d) above. An exception can be seen in (2a) which is used for emphasis. This means when we have a single subject, a singular body part e.g 'hand' is used. We we have many subjects, the plural of the body part e.g 'hands' is used.

Reflexives

Body part hand:

<table>
<thead>
<tr>
<th>Preposition</th>
<th>Subject Person</th>
<th>Possessive Adjective</th>
<th>Possessive Focused Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>nè yaa bo</td>
<td>PREP C1a.1SG.POSS.PRN hand</td>
<td>PREP C6-1SG.POSS.PRN</td>
<td>C6-hands</td>
</tr>
<tr>
<td>nè yoo bo</td>
<td>PREP C1a.2SG.POSS.PRN hand</td>
<td>PREP C6-2SG.POSS.PRN</td>
<td>C6-hands</td>
</tr>
<tr>
<td>nè zhii bo</td>
<td>PREP C1a.3SG.POSS.PRN hand</td>
<td>PREP C6-3SG.POSS.PRN</td>
<td>C6-hands</td>
</tr>
<tr>
<td>nè zhisò bo</td>
<td>PREP C1a.DU.POSS.PRN hand</td>
<td>PREP C6-DU.POSS.PRN</td>
<td>C6-hands</td>
</tr>
<tr>
<td>nè mer</td>
<td>PREP C6.1PL.POSS.PRN C6-hand</td>
<td>mm-bo</td>
<td>ourselves</td>
</tr>
<tr>
<td>nè misèe mm-bo</td>
<td>PREP C6-1PL.INCL.POSS.PRN C6-hands</td>
<td></td>
<td>ourselves</td>
</tr>
<tr>
<td>nè mee mm-bo</td>
<td>PREP C6-2PL.POSS.PRN C6-hands</td>
<td></td>
<td>yourselves</td>
</tr>
<tr>
<td>nè map mm-bo</td>
<td>PREP C6-3PL.POSS.PRN C6-hands</td>
<td></td>
<td>themselves</td>
</tr>
</tbody>
</table>

Comment: Nè is used both as benefactive and instrumental preposition. Yaa, yoo, zhii and zhisò are always used as a class 1a possessive pronoun but the meaning changes when they precede or follow the object noun; possessive adjective and possessive focused adjective respectively. Ma, mo, mi, misò, mer, misèe, mee and map are always used as a class 6 possessive pronouns. The meaning also changes when they precede or follows the object noun; possessive adjective and possessive focused adjective respectively. Bo is sub-class 1a noun, which selects class 6 for plural marker m-; is doubled when the noun begins with a bilabial stop. The rest of the body parts follow this paradigm. But the default has a zero argument with the third singular nè zhii bo which also means by itself.

Unique emphatic pronouns.

<table>
<thead>
<tr>
<th>Pronoun</th>
<th>1SG</th>
<th>2SG</th>
<th>3SG</th>
<th>DU</th>
<th>1PL</th>
<th>1PL</th>
<th>2PL</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mamnji’</td>
<td>Mtnj</td>
<td>Momnji’</td>
<td>Mimnji’</td>
<td>Mtnj</td>
<td>Mtnj</td>
<td>Mtnj</td>
<td>Mtnj</td>
<td>Mtnj</td>
</tr>
</tbody>
</table>

Comment: The possessive forms ma, mo etc are all class 6 possessive pronouns, which is a plural class.

B. Reciprocals:

- Verb extension –ni ‘each other or each party’
- Verb extension –se ‘one after the other’
- Verb extension –te ‘each other or each party’
- Verb extension –nger ‘each other’ (mostly inanimate subjects)
- One CONJ one ‘one and the other’
- Zero option ‘with each other’
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.

Reciprocals

<table>
<thead>
<tr>
<th>Suffix/phrase</th>
<th>Agreement feature</th>
<th>What it must do</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ni</td>
<td>dual antecedents</td>
<td>optional for two subjects or two parties with multiple subjects</td>
</tr>
<tr>
<td>-se</td>
<td>multiple antecedents</td>
<td>obligatory for multiple subjects</td>
</tr>
<tr>
<td>-te</td>
<td>dual antecedents</td>
<td>optional for two subjects or two parties with multiple subjects</td>
</tr>
<tr>
<td>–nger</td>
<td>multiple antecedents</td>
<td>obligatory for multiples subjects</td>
</tr>
<tr>
<td>One CONJ one</td>
<td>multiple antecedents</td>
<td>obligatory for multiples subjects</td>
</tr>
<tr>
<td>Zero option</td>
<td>dual or multiple antecedents</td>
<td>optional for two subjects or two parties of many subjects</td>
</tr>
</tbody>
</table>

No comment for reflexives.

All forms of the above features, Case, person, number and gender (and animacy or noun class, if it is marked in your language) should be given. For any features that are usually or optionally employed, provide an example of a context where the optionality holds and provide as much additional information as you suspect will be useful.

With both body parts and unique emphatic pronoun strategies, morphological agreement with the antecedent can be seen at two levels. The first level is with the number, which is linked to the noun class, and the second is with the persons. Morphological agreement with the persons is limited to the dual and first person plural inclusive of zhisò and misèe respectively. Sò is the dual form for personal pronoun and zhi is selected for a singular antecedent (though dual and for unify action) whereas mi is selected for plural antecedent reference. These possessives are prefixed to the dual form for the dual possessive. Sèe is the first person plural inclusive personal pronoun, which selects mi for the plural antecedent reference. For the number agreement, the singular/plural antecedent is also reflected in the singular/plural possessive form which also agrees with the class number agreement of the body parts. The difference with the unique emphatic pronouns is the mismatch at the level of the plurality of the with body parts and their possessive adjectives with single antecedents which is for emphasis.

3.6 Interaction with verb morphology - Incompatibilities

Reflexives, especially those that are attached to the verb rather than occupying an argument position, are frequently incompatible with other morphological operations that can be applied to the verb.

With reflexives I have observed verb morphology only with the verb talk e.g.

Jôn ce de’nger e
John ASP.CONT talk-ITER vowel echo.
John is talking to himself

Most of the reciprocals are attached to the verb accept the zero option which has an intrinsic reciprocity. The –nger suffix takes a vowel echo for some unknown reasons e.g

Bce bvi ce kùu-nger e
C2-tress C2-3PL.SM ASP.CONT knock-RECIP vowel echo
The trees are knocking each other.

3.6.1 Tense, Mood, Aspect.

It is sometimes observed that coconstrustral strategies are sensitive to the tense, mood or aspect of a clause, particularly if the aspect (whether an event is complete or not) has other syntactic effects. If there is any sign that coconstrustral for some strategy is blocked or peculiar for a given tense (e.g., simple past, habitual, generic), mood (such as subjunctive, if your language marks it), or aspect, please comment and provide examples. Check with at least the verbs meaning see, praise, help, like, know, and wash.
B3a) Ginà ke jà’ zhii tu
Gina ASP.HAB help C1a.3SG.POSS.PRN head
Gina (generally) helps herself
b) Ginà à sù’si nyor/ ba ce sù’si nyor
Gina C1.3SG.SM wash body/ PST1 ASP.CONT wash body
Gina has washed/was washing herself.
c) Ginà à ba know zhii tu
Gina C1.3SG.SM MOD rì C1a.3SG.POSS.PRN head
Gina should know herself.

Comment: The strategy is not blocked by any tense, mood or aspect markers.

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 construal 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.

Comment: There are hardly any changes in grammatical function that affect reflexivity in Limbum.

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
No Comment

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:

A. Reflexives
The body part ‘foot’ is only used to express coreference that is directional as it denotes movement.
E dù London nè zhii kù
3SG go London PREP C1a-3SG.POSS.PRN foot
He went to London himself.

E nù vù àfa nè zhii kù.
3SG PST3 come here PREP C1a-3SG.POSS.PRN foot
He came here himself.

B. Reciprocals
The verb extension –se is used to express coreference to multiple subjects that is directional in the sense of moving one after the other.
Mbaa à nyèe bèe à da’sè
Mbaa à nyèe bèe à da’-sè
Leopard C1-3SG.SM appear people 3PL.SM scatter
When the leopard appeared, the people scattered.
Bèe a ce düse à mjkìnu
Bèe a ce dì-se à mjkìnu
People 3PL.SM ASP.CONT go PREP farm
The people are going to the farm.

3.7.1 Idiosyncratic or inherent.
No comment

[KS: Are there no verbs or predicates that have reciprocal or argument reflexive forms but are not every really transitive, for example?

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) Jôn à m zhe nca nè zhii cùu.
John C1.1SG.SM PST3 eat fish PREP C1a.3SG.POSS.PRN mouth
John ate fish himself.

d) Jôn ye-ye à m̀ zhe nca.
John 3SG.EMPH C1.1SG.SM PST3 eat fish
John himself ate fish.

Comment: The emphases are generally done when the personal pronouns or object pronouns are reduplicated.

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

A) Jôn à m̀ g̀ ee ca nè zhiì bo
John C1.1SG.SM PST3 do DEM.PROX PREP C1a.3SG.POSS.PRN. hand
John alone did this - i.e., only John and no other individuals did this.

B) Jôn à m̀ g̀ ee minji’
John C1.1SG.SM PST3 do 3SG.UNI.EMPH.PRO
John did this alone - John was unaccompanied when he did this.

C) Jôn à m̀ g̀ ee zhanà nè zhiì bo
John C1.1SG.SM PST3 do DEM.PROX PREP C1a.3SG.POSS.PRN. bo
John himself did this - Even John did this (e.g. Although you would not have thought he would, John also ate the crispy jellyfish)

D) Jôn ye ye à m̀ g̀ ee ca
John 3SG.EMPH C1.1SG.SM PST3 do DEM.PROX
John himself did this - Even John did this (e.g. Although you would not have thought he would, John also ate the crispy jellyfish)

KS: Why do you suppose the DEM.PROX is different in (C) as opposed to (A)?
John himself did this - John appearing in person did this (no one did it for him)

3.7.3 Middle.
Limbum middles can be constructed in the way that infinitives or habitual aspect must be included. The pluractional verb extension changes when a different verb is used. The combination of the –se or –ni suffixes and the infinitives in i) and ii) is what brings out the fact there is an implicit agent. The combination of the habitual aspect and the –ŋger suffix in iii) or just the -ŋger suffix in itself reveals the absence of an agent.

i. Mkar mutù ca mi yu àtèr à r-cupsè
M-kar mutù ca mi yu àtèr à r-co'nù
C6-tyres car DEM.PROX C6-3PL.SM be easy INF INF-change-PLU
The tyres on this car change easily.

ii. Mkar mutù ca mi yu àtèr à r-co'nù
M-kar mutù ca mi yu àtèr à r-co'nù
C6-tyres car DEM.PROX C6-3PL.SM be easy INF INF-remove-PLU
The tyres on this car are easily removed.

ii. Mkar mutù ca mi ke co'ŋger àtèr
Mkar mutù ca mi ke co'ŋger àtèr
C6-tyres car DEM.PROX C6-3PL.SM ASP.HAB come out-PLU easy
The tyres of this car easily come out.

Comment: Though the verb suffixes are used to mark reciprocal actions and the reflexives make use of 'body' and 'body parts', the verb suffixes are used here as middles.

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

Reciprocals
Separately
Woowèe a caŋnì a Jôn wèe
Woowèe a caŋ-nì a Jôn wèe
3PL 3PL.SM run-PLU CONJ John ASSO
They competed with John in atlethics.

Jointly
Woowèe a caŋse a Jôn wèe
Woowèe a caŋ-se a Jôn wèe

29
They ran together with John.

Comment: Repeatedly will involve the use of habitual aspect.

No Comment for reflexives.

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).

The speaker addressee context can be used

B5a) Bill à ye wè ka'
Bill C1.3SG.SM see 2SG NEG
Bill did not see X

b) Wè Merì kòŋ wè a?
Q Mary like 2SG. Q
Does Mary like X?
Wè mű du kàŋ bàŋ nɛŋkùr a?
2SG PST2 go LOC bank yesterday Q
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?

Comment: The same form can be used for B6a) but not B6b). With B6b) the tone changes from low to high.

B6a) Bill à m cep wè
Bill C1.3SG.SM PST3 insult 2SG.OBJ
Bill insulted X. (X = speaker, X = addressee)

b) Bèc maŋgɔr a kòŋ nca ka', geenewa' wè ke kòŋ e.
People many 3PLSM like fish NRG CONJ 2SG ASP.HAB like vowel echo
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?

The form in question can still be used with a high tone.

B7a) Më kòŋ njèe njì ce we ke làa yuu nè nỳwè ka'
1SG like manner way REL 2SG ASP.HAB say thing PREP person NEG
I don't like the way he speaks to one.

b) Ade' nỳwè fɛɛnɔyor sè ka'
Ade' nỳwè fɛɛ-si-nyɔr sè ka'
Can person care-CAUS-body INTEN NEG
One cannot be too careful
Bɪl ke cep nỳwè te nɔŋŋɛ ka' làa yuu.
Bill ASP.HAB insult person CONJ the person can say thing.
Bill insults one before one can say a word.
The generic form is nỳwè' s anaphor is nɔŋŋɛ.

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

B15) Ñgała'nsuu a m ye ba nda?
Farmers 3PLSM PST3 see FOC Q
Who did the farmers see?
A m ye ye.
3PL.SUB PST see 3SG.OBJ
They saw him.

(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) Ñgała'nsuu a m ye Merì ka'. A ye ba ye.
Farmers 3PL.SM PST3 see Mary NEG. 3PL see FOC 3SG.OBJ
The farmers didn’t see Mary. They saw 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.

i) Nfò ba ndi a ce de’ c
Nfor CONJ Ndi 3PL.SM ASP.CONT talk vowel echo
Nfor and Ndi are talking to each other.

ii) Mjiri ba Maatà a ce ciwu
Mary CONJ Martha 3PL.SM ASP.CONT whisper
Mary and Martha are having secret talks.

Comment: The above used verbs as associated with speech have a basic meaning of talking to each other. The suffix -ger can be added when coreference is made to a single subject that is speaking to himself. In that case the verb de’ - 'talk' can be used interchangeably with ciw - 'whisper'.

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 "stan-

3.8a) Kastro à m ganì zìii nyor enje mesum bkàablù.
Castro C1a.1SG.SM PST3 admire C1.3SG.POSS.PRN body LOC museum wax
Castro admired himself in the wax museum. (himself = statue of Castro)

b) Grishàm à mbeè be’ ziii tu à ñwè Swàhilì ka’.
Grisham C1.3SG.EVID read C1a.POSS.PRN CONJ person Swahili NEG.
e m banè a ku be’ Swàhilì
3SG PST3 PERF EVID just read Swahili
Grisham has not read himself in Swahili, though he has read himself in Spanish. (himself = 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) Kastro à m sùsì nyor yìnnì, te e bo bepsì bkàablù ka’.
Castro C1.3SG.SM PST3 wash body carefully CONJ 3SG PERM damage wax NEG
Castro washed himself carefully, so as not to damage the wax.

b) Kastro à m sùsì nyor yìnnì, te e bo bepsì bkàablù ka’.
Castro C1.3SG.SM PST3 wash body carefully CONJ 3SG PERM damage wax NEG
Castro washed carefully, so as not to damage the wax.

c) Đwëŋgeñmeñr ntatà à sùsì nyor yìnnì te e bo bepsì bkàablù ka’.
Movie star tough C1.3SG.SM dress body carefully CONJ 3SG PERM damage wax NEG
The movie star dressed herself carefully, so as not to damage the wax.

d) Đwëŋgeñmeñr ntatà à sùsì nyor yìnnì te e bo bepsì bkàablù ka’.
Movie star tough C1.3SG.SM dress body carefully CONJ 3SG PERM damage wax NEG
The movie star dressed carefully, so as not to damage the wax.

e) Kastro à m ye zìii nyor nje sìrma, geenewa’ e kùn yuu ce
e m m ñ” ka’
3SG PST3 see NEG
Castro saw himself in the show, but he didn’t like what he saw.

KS: Is it the case that the use of ‘x’s body’ is just literal here rather than reflexive per se, as in English ‘he washed his body’ which is not really reflexive any more than ‘John washed his shovel’ is. It may not be possible to tell.
Grisham says he sounds better in Swahili. (where he = Grisham's writings)

b) Kastro à mbù' kwa' e ne e ko' mbómg'bo.
Kastro à mbù' kwa' e ne e ko' mbómg'bo.

Castro C.3.SG.SM PST3 think 3SG.COMP 3SG look handsome

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

KS: Would you use a different 3SG subject pronoun if 'he' referred to Castro the person, not the statue?

Proxy readings for reciprocols. 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.

KS: B11b appears to be a proxy reading in the relevant sense, but B11a looks like a circumlocution.

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) Shermàn ke kòm'naa zhii tu caa Bîl
Sherman ASP.HAB like/praise C.1a.3SG.POSS.PRN head pass Bill

Sherman likes/praises himself more than Bill

b) Shermàn ke kòm'naa zhii tu caa àmbò Bîl e ke mòo
Sherman ASP.HAB like/praise C.1a.3SG.POSS.PRN head pass ADV Bill 3SG ASP.HAB try

Sherman likes/praises himself more than Bill does.

i. Shermàn ke kòm'naa zhii tu caa àmbò ye Shermàn kòm Bîl
Sherman ASP.HAB like/praise C.1a.3SG.POSS.PRN head pass ADV 3SG.OBJ Sherman likes Bill

Sherman likes/praises himself more than Sherman likes Bill.

ii. Shermàn ke kòm'naa zhii tu caa àmbò Bîl kòm ye.
Sherman ASP.HAB like/praise C.1a.3SG.POSS.PRN head pass ADV Bill likes 3SG.OBJ

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

iii. Shermàn ke kòm'naa zhii tu caa àmbò Bîl kòm zhii tu
Sherman ASP.HAB like/praise C.1a.3SG.POSS.PRN head pass ADV Bill likes C.1a.3SG.POSS.PRN head

Sherman likes/praises 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.

iv. Sàmsìn ke zhe kwâa caa Jôn
Samson ASP.HAB eat maize pass John
Samson eats corn more than John.

v. Pôl ke dü ntaa caa âmbò bêè a ke dü.
Paul ASP.HAB go market pass ADV people 3PL.SM ASP.HAB go
Paul goes to the market more than people do go.

vi. Ndì ke taŋ buu âmbò She ke taŋ ka’
Ndi ASP.HAB fight things ADV Shey ASP.HAB fight not.
Ndi does not strive for things as Shey does.

PART 4 Exploration of syntactic domains
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) Jôn à lip i
John C1.3SG.SM hit vowel echo
*John hit.

Comment: This is acceptable in Limbim
b) Jôn à lip zhii kù nè zhii bo.
John C1.3SG.SM hit C1a.POSS.ADJ leg PREP C1a.POSS.ADJ hand
John hit himself.

Comment: In Limbum the body part affected must be named and not the whole body.
c) Boombaŋw à m lip i
C2-Boys 3PL.SM PST3 hit vowel echo
*The boys hit.

d) Boombaŋw à lip-ni i
Boombaŋw à lip-ni i
The boys hit each other.
e) Boombaŋw à lip-ni mò’ ba mò’
Boombaŋw à lip-ni mò’ ba mò’
C2-Boys 3PL.SM hit-RECIP one CONJ one
The boys hit one another.
f) Boombaŋw à m lip ye
C2-Boys 3PL.SM PST3 hit 3SG.OBJ
*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) Jôn à m sù’ si nyor.
John C1.3SG.SM PST3 wash body
John washed.

b) Jôn à m sù’ si zhii nyor.
John C1.3SG.SM PST3 wash C1.3SG.POSS.ADJ body
John washed himself.

bii) Jôn à m sù’ si nyor zhii
John C1.3SG.SM PST3 wash body C1.3SG.POSS.ADJ
John washed himself.

c) Boombaŋw à m sù’ si wap mnyor
Boombaŋw à m sù’ si wap m-nyor
Boys 3PL.SM PST3 wash C6.3PL.POSS.ADJ C6-bodies
The boys washed.

Boombaŋrù a ̀m sù’sì m-nyor ese mò’ ba mò.’
Boombaŋrù a ̀m sù’sì m-nyor ese mò’ ba mò.’
Boys 3PL.SM PST3 wash C6-bodies PREP one CONJ one
The boys washed each other.

Boombaŋrù a ̀m sù’sì m-nyor ese mò’ ba mò.’
Boombaŋrù a ̀m sù’sì m-nyor ese mò’ ba mò.’
Boys 3PL.SM PST3 wash C6-bodies one CONJ one
The boys washed one another.

Boombaŋrù a ̀m sù’ngye.
John C1.3SG.SM PST3 wash 3SG.OBJ
*John washed him.

Comment: Examples (X2c-e) shows that the verb sù’ngye does not take the reciprocal suffix –ni or –se but will prefer the ‘one CONJ one’ strategy.

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) Jôn à ye zhìi ma bi ye
John C1.3SG.SM see C1.3SG.POSS.ADJ mother born 3SG.OBJ
*John saw himself’s mother.

b) Jôn à ̀m sù’sì ma.
John C1.3SG.SM PST3 see mother
*John washed mother,

c) Jôn a Bil a ye-ni a wap mmâ.
Jôn a Bil a ye-ni a wap m-mâ.
John CONJ Bill 3PL.SM see-RECIP PREP C6-3PL.POSS.ADJ C6-mothers
*John and Bill saw each other’s mother.

d) Jôn a Bil a ye-ni a ma zhì mò’ ba mò’
Jôn a Bil a ye-ni a ma zhì mò’ ba mò’
John CONJ Bill 3PL.SM see-RECIP PREP mother C1.3SG.POSS.ADJ one CONJ one
*John and Bill saw one another’s mother.

e) Jôn a Bil a ye yàp mā.
John CONJ Bill 3PL.SM see C1.3PL.POSS.ADJ mother
John and Bill saw their mother.

f) Jôn à ̀m sù’si/ye zhìi mā.
John C1-3SG.SM PST3 wash/see C1.3SG.POSS.ADJ mother
John washed/saw his mother.

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

C1a) Bob à ̀m ye Jôn
Bob C1.3SG.SM PST3 see John
Bob saw John.

b) Bbyènge a ̀m suŋ ̀ambò ʦhì
Women 3PL.SM PST3 talk ADV chief
The women described the chief.

c) Wèe à tashi mbù
Wèe à ta-shi mbù
2PL C1.2PL.SM kick-PLU goat
You(pl.) kicked X.

d) Woowèc a nàa Njoŋ
3PL, 3PL.SM praise God
They praised X

e) E tuusi ŋwà’
E tuu-si ŋwà’
3SG send-CAUS letter
He sent a letter

f) Mè mú teni ntaanguu
Mè mú te-ni ntaanguu
1SG. PST2 cut-DU stick
I cut the stick.

They praised X

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) Donnà à m sù’si nyor.
Donna C1.3SG.SM PST3 wash body
Donna washed X. (X = Donna)

b) Don à m kooshi tu
Don à m koo-shi tu
Don C1.3SG.SM PST3 cut-ITER head
Don cut X’s hair. (X = Don).

c) Muunje à m le= nyor
 girl C1.3SG.SM PST3 cut body
The girl cut X [unintentionally] (X = the girl)

Comment: In Limbum, the addition of the possessives in (C3a-b) will mean the subject was expecting someone to do it and then did it himself or the action is focused on the doing only for him whereas adding the body part ‘hand’ excludes the fact that another subject did it. The addition of a possessive or the body part ‘hand’ to (C3c) changes the meaning from unintentionally to intentionally.

d) Emma à tee tu
Emma C1.3SG.SM redeemed head
Emma has redeemed herself.

e) Jôn à tee ntukìì
John C1.3SG.SM stub toe
John has stubbed his toe.

f) Mèri à tee ntubo
Mary C1.3SG.SM cut finger
Mary has cut her finger.

g) Jôn ke nàanyor së.
Jôn ke nàa-nyor së.
John ASP.HAB proud INTEN
John is very proud of himself.

Comment: Although the verbs used above look like homophones, but they are semantically related.

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.

g) John ke nàanyor së.
Jôn ke nàa-nyor së.
John ASP.HAB proud INTEN
John is very proud of himself.
C4a) Jôn ke bàa/wrp buubkuu
John ASP.HAB hate/wrp bedbugs
John hates/fears bedbugs
Acceptable in Limbum with the two verbs
b) Ritu zhi ce koo Jôn nè bvi blaba’ brùn
Ritu zhi ce koo Jôn nè bvi b-laba’ b-rin
Shame C7.3SG.SM ASP.CONT catch John PREP C2.3SG.POSS.ADJ C2-shoes C2-old
John is ashamed of his old shoes.
Word order not acceptable in Limbum
c) Yanj Mrî zhi ce fa Jôn ngɛ̀.
Illness Mary C1a.3SG.SM ASP.CONT give John worry
John is worried about Mary’s illness
Word order not acceptable in Limbum
d) Jôn ce nàtu âmbâ Mrî.
John ASP.CONT proud ADV Mary
John is proud of X
e) Jôn ke fa ngɛ̀ nè Pità.
John ASP.HAB give trouble PREP Pità
John worries/troubles Peter
f) Jôn ke gè Pità ce yu’ rboŋ.
John ASP.HAB make Peter ASP.CONT feel happy
John pleases Peter.

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").

C6a) Njẹnjẹ anâ be bepsî kẹq.
Njẹnjẹ anâ be bepsî kẹq.
Woman ANA.DET FUT1 destroy-CAUS door
The women will destroy the door.
b) Mmàshin bvi m boo nè map mmbo.
Mmàshin bvi m boo nè map mmbo.
C6-machine C6-3PL.SM PST3 build PREP C6-3PL.POSS.ADJ C6-hands
The machines built X (X = themselves)
c) Tɛlò à m tarshi bɛ̀.
Tɛlò à m tarshi bɛ̀.
Tailor C1.3SG.SM PST3 sew-PLU C2-clothes
The tailor sew the clothes.
d) Pôl rîŋ à rkuϕshi mkar
Pôl rîŋ à rkuϕshi mkar
Paul know INF. INF-make-PLU C6-wheels
Paul knows how to make wheels.
e) Mbaa à zhu nyọ.
Leopard C1.3SG.SM kill snake
The leopard has killed a snake.
f) A fur tim yăp
3PL eliminate team C1.3PL.POSS.FOC.ADJ
Their team has been eliminated.
g) Êwëffî be bũsi laba’.
Êwëffî be bũsi laba’.
Magician FUT1 make disappear-CAUS shoe.
The magician will make the shoe to disappear.

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

C5a) Boombaŋ rű a tɛɛ à bπi wap
Boombaŋrù a tre à b-tu wap
Boys 3PL.SM represent PREP C2-heads C2-3PL.POSS.ADJ
The boys represented themselves.

b) Jōn à fàa ekù zhii cùu.
John C1.3SG.SM speak PREP C1a.3SG.POSS.ADJ mouth
John spoke for himself.

Comment: Since there are no nuances in (C6b) as to the person who is speaking, the possessive must not be focused. But if the possessive in C6a is not focused, then it will mean the boys represented others.

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) Mɛ̀rì à m̀ nòŋsi b̀kèe ǹ zhrì tu.
Mary C1.3SG.SM PST3 keep gifts PREP C1a.3SG.POSS.ADJ head
Mary kept the gift to X (X = Mary)

b) Jōn à m̀ kùŋsi ngwe à mmbò mni.
John C1.3SG.SM PST3 breed-CAUS dog PREP C6-hands C6-1SG.POSS.FOC.ADJ
John bred the dog X (X = John)

For comparison, also provide judgements for the following:

C8a) Mɛ̀rì à fa zhìi tu à bsàceland
Mary C1.3SG.SM give C1a.3SG.POSS.ADJ head
Mary gave X into prostitution (X = Mary)

b) Jōn à dàŋshi bvi bsìi ǹ esse.
John C1.3SG.SM show C2.3SG.POSS.ADJ C2-face PREP children
John showed X to the children (X = John)

Comment: In (C7a) we can see that 'give' cannot be used in a long distance anaphora and can only be accepted within the same domain as in (C8a). Hence I changed the verb 'give'. With the 'show oneself', (C8b) I have realized the use of another body part 'face' which I did mention above.

4.1.2.2 Oblique arguments - Give some examples with oblique arguments, in whatever forms your language allows. Choose verbs that take oblique arguments in your language and if your language has morphological case, look for arguments that are not in the normal case for objects (e.g., not in the Accusative).

C9a) Accusative Dànn à dé’ Mɛ̀rì
Dan C1.3SG.SM talk Mary.
Dan has scolded Mary.

b) Dative Fà m̀ ñwa’ cà.
Give 1SG book DEM.DIS
Give that book to me.

c) Object of Prep Fà kèr nòŋsi mbë m̀ nd̀iù ka’
Fa kèr nòŋ-ŋì mbe m̀ ndìù ka’
NEG again place-CAUS PREP 1SG.POSS.ADJ top NEG
Don’t place it on me again.

d) Disjunctive M̀ kòŋ yaa ba m̀ dip
1SG like 1SG.POSS FOC water
Me, I prefer water.

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) Mɛ̀rì à ye nyo mbe yè nji
Mary C1.3SG.SM see snake PREP 3SG.POSS back
Mary saw a snake behind X (X = Mary)

b) Meri à dündhi nè Hâl ye-ye
Mary C.1.3SG.SM show PREP Hal 3SG-Asso
Mary showed Hal to X. (too)

c) Bil à fa nè Hâl seèsè.
Bill C.1.3SG.SM give PREP Hal 3SG.ADJ.
Bill gave Hal X. (in person/particular)

d) Bil à fa seèsè ba nè Hâl.
Bill C.1.3SG.SM give ADV FOC PREP Hal
Bill gave X Hal.

e.i) Meri à m suŋ boombaŋrù àmbò wap btu.
Mary C.1.3SG.SM PST3 tell boys ADV C.2.3PL.Poss.ADJ C.2-heads
Mary told the boys about themselves/each other.

e.ii) Meri à m bipshi nè boombaŋrù àmbò mò' ba mò'.
Mary C.1.3SG.SM PST3 ask PREP boys ADV one CONJ one
Mary told the boys about themselves/each other.

f) Meri à m dündhi/suŋ rîi boombaŋrù nè mò' ba mò'.
Mary C.1.3SG.SM PST3 show/introduced/presented boys PREP one CONJ one
Mary showed/introduced/presented the boys to each other.

Comment: Take note of new strategies yeey – 'he/she too' which is a reduplication of the 3SG object pronoun and seèsè which is either an adverb or an adjective depending on where it occurs and the use of the focus markers as well.

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.

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).

b) Bil à suŋ ìmbò Hâl nè ye seèsè.
Bill C.1.3SG.SM talk ADV Hal PREP 3SG.OBJ 3SG.ADJ
Bill talked about Hal to X. (in person)

c) Bil à suŋ Hâl ìmbò zhìi tu
Bill C.1.3SG.SM talk Hal PREP C.1.3SG.Poss.ADJ head
Mary talked to Hal about X.

d) Bil à suŋ seèsè ba ìmbò Hâl.
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) às mbè̀lèfon ma zhii 
(Tell.) C1.3SG.SM PST3 telephone mother C1.3SG.POSS.FOC.ADJ

b)  
(Nick) às m̀ shà́ tu zhii 
(Tell.) C1.3SG.SM PST3 comb head C1a.3SG.POSS.FOC.ADJ

(c)  
(Nick) às m̀ de' a zhii tarfà'. 
(Tell.) C1.3SG.SM PST3 talk PREP C1a.3SG.POSS.ADJ boss

C14a)  
(Tell.) C1.3SG.POSS.FOC.ADJ Nick ke gain ye.

b)  
(Bfaas) nik bvi jep-sì ye.

C2-Ambition nick C2.3SG.POSS.FOC.ADJ 3SG.OBJ

C13a)  
(Nick) às mbè̀lèfon ma zhii 
(Tell.) C1.3SG.SM PST3 telephone mother C1.3SG.POSS.FOC.ADJ

b)  
(Nick) às m̀ shà́ tu zhii 
(Tell.) C1.3SG.SM PST3 comb head C1a.3SG.POSS.FOC.ADJ

(c)  
(Nick) às m̀ de' a zhii tarfà'. 
(Tell.) C1.3SG.SM PST3 talk PREP C1a.3SG.POSS.ADJ boss

C14a)  
(Tell.) C1.3SG.POSS.FOC.ADJ Nick ke gain ye.

b)  
(Bfaas) nik bvi jep-sì ye.

C2-Ambition nick C2.3SG.SM destroy-CAUS 3SG.OBJ

C13a)  
(Nick) às mbè̀lèfon ma zhii 
(Tell.) C1.3SG.SM PST3 telephone mother C1.3SG.POSS.FOC.ADJ

b)  
(Nick) às m̀ shà́ tu zhii 
(Tell.) C1.3SG.SM PST3 comb head C1a.3SG.POSS.FOC.ADJ

(c)  
(Nick) às m̀ de' a zhii tarfà'. 
(Tell.) C1.3SG.SM PST3 talk PREP C1a.3SG.POSS.ADJ boss

C14a)  
(Tell.) C1.3SG.POSS.FOC.ADJ Nick ke gain ye.

b)  
(Bfaas) nik bvi jep-sì ye.

C2-Ambition nick C2.3SG.SM destroy-CAUS 3SG.OBJ

C13a)  
(Nick) às mbè̀lèfon ma zhii 
(Tell.) C1.3SG.SM PST3 telephone mother C1.3SG.POSS.FOC.ADJ

b)  
(Nick) às m̀ shà́ tu zhii 
(Tell.) C1.3SG.SM PST3 comb head C1a.3SG.POSS.FOC.ADJ

(c)  
(Nick) às m̀ de' a zhii tarfà'. 
(Tell.) C1.3SG.SM PST3 talk PREP C1a.3SG.POSS.ADJ boss

C14a)  
(Tell.) C1.3SG.POSS.FOC.ADJ Nick ke gain ye.

b)  
(Bfaas) nik bvi jep-sì ye.

C2-Ambition nick C2.3SG.SM destroy-CAUS 3SG.OBJ

Note in (C14a) that possession is marked by a rising tone.

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

X20a.i)  
Boomboàŋ à m̀ yìè mlè̀shi mmanda 
Boomboàŋ à m̀ yìè m-lè̀shi mmanda

Boys 3PL.SM PST3 see C6 pictures C6-3PL.POSS.ADJ

The boys saw pictures of themselves/their

a.ii)  
Boomboàŋ à m̀ yìè mlè̀shi ese mò' ba mò'. 
Boomboàŋ à m̀ yìè m-lè̀shi ese mò' ba mò'.

Boys 3PL.SM PST3 see C6 pictures PREP one CONJ one

The boys saw pictures of each other.

b.ii)  
Mërì à m̀ suŋ booming àmbò map mlè̀shi 
Mërì à m̀ suŋ booming àmbò map m-lè̀shi

Mary C1.3SG.SM PST3 tell boys PREP C6-3PL.POSS.ADJ C6 pictures

Mary told the boys about pictures of themselves/their

b.ii)  
Mërì à m̀ suŋ booming àmbò mlè̀shi mò' ba mò'. 
Mërì à m̀ suŋ booming àmbò m-lè̀shi mò' ba mò'.

Mary C1.3SG.SM PST3 tell boys PREP C6 pictures one CONJ one

Mary told the boys about pictures of each other

Comment; The reflective reading cannot be the same as the former because it carries the meaning of each of the boys bringing pictures of the themselves or pictures of each of them.

c)  
GàlìPolitical à m̀ tami mò' ba mò'.

39
Politicians 3PL.SM PST3 plan attacks one CONJ one
The politicians planned attacks against each other.

Di) ọgälapòlitik a ụh faani ụmụ wap mnyor
Ọgälapòlitik a ụh faa-ni ụmụ wap m-nyor
Politicians 3PL.SM PST3 faked/simulated attacks-DU PREP C6.3PL.POSS.ADJ C6-bodies
The politicians faked/simulated attacks against themselves.

D.ii ọgälapòlitik a ụh faa à nini woowè.
Ọgälapòlitik a ụh faa à r-nini woowè.
Politicians 3PL.SM PST3 faked/simulated INF INF-enter them
The politicians faked/simulated attacks against them.

Comment; The dual reciprocal meaning see with the use of –ni in (d.i) indicates division into two camps will match with ‘themselves’ rather than ‘them’ as they will mean others and not the subjects of the antecedent.

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 himself.

C15a) Pòli ọ̀ à náà žii tu
Polly C1.3SG.SM praise C1a.3SG.POSS.ADJ head
Polly was praised by X

b) Pòli ọ̀ à jà’ žii tu
Polly C1.3SG.SM help C1a.3SG.POSS.ADJ head
Polly was helped by X

c) Pòli rì̀g m̀uchàr Ambò žii tu
Polly know little ADV C1a.3SG.POSS.ADJ head
Little is known by Polly about X (X = Polly)

d) Kàablù zhi sɔ̀bri nè žii bo
Wax C7.3SG.SM melt PREP C1a.3SG.POSS.ADJ hand
The wax melted itself

Comment; Passive constructions cannot be done in Limbum. With any constructions requiring the use of ‘by’ the body parts are used. In case of an odd agency, the causative marker –si is used in place of the –ri (though not suffixed) and the body part will be changed from ‘hand’ to ‘body’.

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 sentences.
C16a) Mè /M m̀ ỳe yàa nyor
1SG PST3 see C1-1SG.POSS.ADJ body
I saw X.

b) Wè /ù m̀ ỳe yòò nyor
2SG PST3 see C1-2SG.POSS.ADJ body
You saw X. (etc.)

c) È m̀ ỳe žii nyor
3SG PST3 see C1-3SG.POSS.ADJ body
He saw X.

d) Sò à m̀ ỳe bvisò mnyor
Sò à m̀ ỳe bvisò m-nyor
DU DU.SM PST3 see C6-DU.POSS.ADJ C6-bodies
1SG + 2SG saw X

e) Wèr à m̀ ỳe wer mnyor

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f) Wèr ye à  m yè wer m-nyor
Wèr ye à  m yè wer m-nyor
1PL 3PL.SG PST3 see C6-1PL.POSS.ADJ C6-bodies
1PL saw X

g) Wèr woowèe à  m yè wer m-nyor
Wèr woowèe à  m yè wer m-nyor
1PL 3PL.SG PST3 see C6-1PL.POSS.ADJ C6-bodies
1PL + 3SG saw X

h) Sèè à  m yè bvisée m-nyor
Sèè à  m yè bvisée m-nyor
1PL.INCL 3PL.SG PST3 see C6-1PL.INCL.POSS.ADJ C6-bodies
1SG + 2PL/1PL + 2SG/1PL + 2PL saw

i) Sèè woowèe à  m yè bvisée m-nyor
Sèè woowèe à  m yè bvisée m-nyor
1PL.EXCL 3PL.SG PST3 see C6-1PL.EXCL.POSS.ADJ C6-bodies
1PL.INCL + 3PL saw X.

j) Wèè à  m yè wee m-nyor
Wèè à  m yè wee m-nyor
2PL 2PL.SG PST3 see C6-2PL.POSS.ADJ C6-bodies
2PL saw X

k) Wèè ye à  m yè wee m-nyor
Wèè ye à  m yè wee m-nyor
2PL 2PL.SG PST3 see C6-2PL.POSS.ADJ C6-bodies
2PL + 3SG saw

l) Wèè woowèe à  m yè wee m-nyor
Wèè woowèe à  m yè wee m-nyor
2PL 2PL.SG PST3 see C6-2PL.POSS.ADJ C6-bodies
2PL + 3PL saw X

m) Woowèe / A a  m yè wap m-nyor
Woowèe / A a  m yè wap m-nyor
3PL 3PL.SG PST3 see C6-3PL.POSS.ADJ C6-bodies
3PL saw X

Comment; This exercise is also useful because it clearly brings out the mismatch of the subject markers vis-a-vis their noun classes. The mismatch between the class 2 possessive inclusive of bvisè and bvisée with class 6-inclusive possessive misò and misèe can also be seen here.

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

C17a) Mè  m sùsì bće.
Mè  m sùsì bće.
1SG. PST3 wash C2-clothes
I washed X.

b) M bàa nyàanyo
M bàa nyàa-nyo
1SG hate meat-snake
I hate X.

c) Mè  m sùn jòn àmbò wèr
1SG PST3 tell John PREP hunt
I told John about X

d) Mè  m yè nyo ègeè ye
1SG m see snake LOC 3SG.OBJ
I saw a snake near X

e) Yàà mandap kòn mè.
C1.1SG.POSS.ADJ girlfriend like 1SG.
I am liked by X.

f) Mè  m tìffon yàà mà.
I telephoned X's mother

My father admires X

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) Mghàghar mì ke kùti nè zhii bo
C6-History C6-3PL.SM ASP.HAB repeat PREP C1a.3SG.POSS.ADJ hand

This type of fish cannibalizes X

Comment: As a result of inanimacy, the body part 'hand' is used as in (C18a) and (C18c). With animate subjects, the body part 'head' is used as in (C18b).

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.

A. Speech introducers:

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<thead>
<tr>
<th></th>
<th>Indirect speech</th>
<th>direct speech/quotes</th>
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<tbody>
<tr>
<td>a) Mè làa mënë</td>
<td>mënë:</td>
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<tr>
<td>1SG say</td>
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<td>Mè làa me-ne</td>
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<tr>
<td>1SG say</td>
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<tr>
<td>b) Wè làa wënë</td>
<td>wënë:</td>
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<td>2SG say</td>
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<td>Wè làa we-ne</td>
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<td>2SG say</td>
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<td>c) E làa enë</td>
<td>enë:</td>
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<tr>
<td>3SG say</td>
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<td>E làa e-ne</td>
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<td>3SG say</td>
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<td>d) Zhi làa zhine</td>
<td>zhine:</td>
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<td>3SG say</td>
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<td>Zhi làa zhi-ne</td>
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<td>d) Sò à làa sone</td>
<td>sone:</td>
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<td>DU SM say</td>
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<td>Sò à làa so-ne</td>
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<td>DU SM say</td>
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<td>e) Wèr à làa wernë</td>
<td>wernë:</td>
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<td>1PL say</td>
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<td>Wèr à làa wer-ne</td>
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<td>1PL say</td>
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<td>f) Sèe à làa see-në</td>
<td>see-në:</td>
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<td>1PL.INCL say</td>
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<td>g) Wèè à làa weènë</td>
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<td>2PL say</td>
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<td>h) Woowèè a làa anë</td>
<td>anë:</td>
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<td>3PL say</td>
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<tr>
<td>Woowèè a làa a-ne</td>
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<tr>
<td>3PL say</td>
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</table>
Comment: I distinguish speech introducers from completemisers because the speech introducers have these direct quote forms with the rising tone. The forms of the completemisers are the same as the forms of the indirect quotes.

Clitizisation of WH-questions:

a) Mɛ̀ làa me-ke 1SG say 1SG,Q
b) Wɛ̀ làa we-kɛ 2SG say 2SG,Q
c) E làa e-kɛ 3SG say 3SG,Q
d) Zhi làa zhi-kɛ 3SG say 3SG,Q
e) Sò à làa sò-kɛ DU 1PL.SM say 1PL,Q
f) Sèe à làa see-kɛ 1PL.INCL 1PL.SM say 1PL,Q
g) Wève à làa wee-kɛ 2PL 2PL.SM say 2PL,Q
h) Woowèe a làa a-kɛ 3PL 3PL.SM say 3PL,Q

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) Njeqwè wewè à ṭh ye zhìi nyor
Woman-QUAN C1.3SG.SM PST3 see C1a-3SG.POSS.ADJ body
Every woman saw X.

b) Muu wewè à ṭh sì'si nyor
Child- QUAN C1.3SG.SM PST3 wash body
Every child washed X.

c) Muuanteval wewè ke baa zhii tu
Student- QUAN ASP.HAB hate C1a-3SG.POSS.ADJ head
Every student hates X.

d) Muu wewè à ṭh ye nyo a yɛ̃ geŋ.
c) Muu wewè à ṭh ye nyo a yɛ̃ geŋ.

Repeat, replacing the quantifier "Every N" with "No N", and if any quantified antecedents behave differently from these, please provide the same paradigm.
Comment: It does not behave differently.

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) A nda m̋ ye nda?
Is Q PST3 see who
Who saw X?

b) A nda m̋ sù'si nda?
Id Q PST3 wash Q
Who washed X?

c) A nda m̋ ye nyo àgee nda?
Is Q PST3 see snake LOC Q
Who saw a snake near X?

d) A nda m̋ ke' ma zhi nda?
Is Q PST3 call mother 3SG.POSS Q
Who telephoned X's mother?

e) A nda m̋ nyo àgee nda?
Is Q PST3 see snake LOC Q
Whose father admires X?

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) Rli rli rli m̋ ye Fred.
Rli rli rli m̋ ye Fred
X saw Fred.

b) Rli rli rli m̋ ye wēr
Rli r-li rli m̋ ye wēr
X saw us. (X = us)

c) * Rli rli rli m̋ ye nyo mbenjì Fred
C5-3SG.POSS.ADJ C5-3SG.SM PST3 see snake LOC Fred
X saw a snake behind Fred.

d) * Zhii tu zhi m̋ n̋si Fred.
Zhii tu zhi m̋ n̋si Fred.

C1a head C1a-3SG.SM PST3 impress-Caus Fred
X impressed Fred

e) *Bill à m̋ làa ekù zhii ciu âmbò Fred
Bill C1-3SG.SM PST3 speak PREP C1a-3SG.POSS.ADJ mouth ADV Fred
Bill spoke to X about Fred.

f) *Bill à m̋ suŋ âmbò Fred
Bill C1-3SG.SM PST3 tell ADV Fred
Bill told X about Fred

g) * Zhii tu zhi m̋ nàa Fred.
Zhii tu zhi m̋ nàa Fred.

C1a head C1a-3SG.SM PST3 praise Fred
X was praised by Fred.

h) *Yoo tu zhi m̋ kɔŋ wà.
C1a-2SG.POSS.ADJ head C1a-3SG.SM PST3 like 2SG.
X is liked by you. (X = you)
If the current strategy permits a possessive position to be coreferent with its antecedent, please indicate if an anaphor or a pronoun is possible in the position of X, which should correspond to George in all of these examples.

C22a) *E m tilifon ma zhi Josh
3SG. PST3 telephone mother 3SG.POSS George
X telephoned George's mother.

b) Ma zhi Josh à m ròò à rkiši Josh.
Ma zhi Josh à m ròò à r-kiši Josh.
Mother 3SG.POSS George C1-3SG.SM PST3 want INF INF-improve George
X's mother wanted to improve George.

c) Ma zhi Josh à m fa nge nè yè Josh
Mother 3SG.POSS George C1-3SG.SM PST3 give trouble PREP 3SG.OBJ George
X's mother worried/impressed George.

d) Mre à m suñ ma zhi Josh ambò yè Josh.
Mary C1-3SG.SM PST3 tell mother 3SG.POSS George ADV 3SG.OBJ George
Mary told X's mother about George.

e) Rliŋshima zhi Josh rli m gwè mbendì au yè Josh.
Picture mother 3SG.POSS George C5-3SG.SM PST3 fall LOC 3SG.OBJ George
A picture of X's mother fell on George.

f) Rliŋshi ma zhi Josh rli m bòŋ yè Josh.
Picture mother 3SG.POSS George C5-3SG.SM PST3 nice 3SG.OBJ George
A picture of X's mother pleased George.

Comment: Note the insertion of the object pronoun in C22c-f) for the sentence to be well-formed in Limbum and when left out may form a weak sentence construction.

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.

In Limbum, the relativiser is vital for topicalisation e.g.
Jôn ce zhii ma ke kòŋ
John REL C1.3SG.POSS.ADJ mother ASP.HAB love
John, his mother loves

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) Byenge a ke jà se mò ba mò
Byenge a ke jà se mò ba mò
Women 3PL.SM ASP.HAB help-PLU.RECIP one CONJ one.
The women help X.

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) Njenzwè wrw ke jà bbyengwe wrw le zhii tu
Njenzwè wrw ke jà bbyengwe wrw le zhii tu
Woman 3PL ASP.HAB help C2-women 3PL keep C1a-3SG.POSS.ADJ head
Each woman helps all (or almost all) of the women, excluding herself.

b) Njenzwè wrw ke jà bbyengwe wrw nè zhii tuŋwè
Njenzwè wrw ke jà bbyengwe wrw nè zhii tuŋwè
Woman 3PL ASP.HAB help C2-women 3PL PREP C1a-3SG.POSS.ADJ head-INCL
Each woman helps all of the women, including herself.

c) Njenzwè wrw ke kù jà bbyeng mo'.
Which ones permit reciprocal readings (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 possible?

Does the strategy allow the construction 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?

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

Comment: Each woman helps one of the women other than herself, such that all of the women are helped by one of the others. Only (C24f) permits reciprocal reading. (C24f) allows a prepositional-phrase anaphoric reading and the rest make use of the body part ‘head’.

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

Comment: Collective action here reveals division into two camps thus makes use of the dual reciprocal.

Comment: Collective action excludes "one CONJ one" strategy and the possessive/body parts are used thus permitting only reflexives. 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?

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" or "the children are washing each other." This means either "the children are washing themselves" or "the children are washing each other."

Comment: In Limb, reflexives strictly take possessives/ body parts and reciprocals take "one CONJ one" strategy or the reciprocal suffixes of –ni and –se.

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.

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

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?
John C1-SG.SM PST meet-RECIP CONJ Bill
John met X with Bill (Meaning: "John and Bill met each other.")

b) Jôm à m yêni a Bil
Jôm à m ye-ni a Bil
John C1-SG.SM PST see-DU-RECIP CONJ Bill
John saw X with Bill (Meaning: "John and Bill saw each other.")

Comment: This strategy is the same but the take different morphemes.

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) Jôm a Meři a nàa mó’ ba mó’.
John CONJ Mary 3PL.SM praise one CONJ one
John and Mary praised X.

b) Bhyenge a nàa mó’ ba mó’
C2-Women 3PL.SM praise one CONJ one
The women praised X.

Comment: The verb praise prefers the 'one CONJ one' reciprocal strategy. Addition of the –ni suffix is permitted but when the verb meaning changes.

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

C29a) Jôm a Meři a de’ e
John CONJ Mary 3PL.SM speak vowel echo
John and Mary spoke to X.

Zero option

b) Jôm a Meři a tarte e
Jôm a Meři a tar-te e
John CONJ Mary 3PL.SM meet vowel echo
John and Mary met with X.

c) Jôm a Meři a rì nà fa ńwà’ ca ńë Pôl
John CONJ Mary 3PL.SM PST3 give book DEM.PROX PREP Paul
John and Mary gave this book to X.

Comment: Reciprocity is not possible between multiple subjects and indirect object.

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) Bil a Meři a kwà’shi a ne a kòñin i.
Bill a Meři a kwà’shi a-ne a kòñin i.
Bill CONJ Mary 3PL.SM think-PLU 3PL.COMP 3PL.SM like-DU.RECIP vowel echo
Bill and Mary think that they like X.

4.1.4.3 Sociative readings

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

C31ai) Mbù zhi m da’se e.
C7-baboons C7-3PL.SM PST3 left-RECIP vowel echo.
The baboons left together.

a) Mbù zhi m dàse jëërëjërë
C7-baboons C7-3PL.SM PST3 go-RECIP differently
The baboons left together.

b) Mbù zhi m zhe nca àbee
Mbù zhi m zhe nca à-bee
C7-baboons C7-3PL.SM PST3 eat fish PREP-together
The baboons ate fish together.

bii) Mbù zhi m zheoger àbee
Mbù zhi m zhe-oger à-bee
4.2 Cross-clausal binding

4.2.1 Coreference relations across typical tensed clausal complement

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)

<table>
<thead>
<tr>
<th>Jak à laa ene e turbfee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack 3SG.SM say 3SG.INTRO 3SG smart</td>
</tr>
</tbody>
</table>

D1b)

<table>
<thead>
<tr>
<th>Jak riŋ ene Josh kòŋ ye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack know 3SG.COMP George like 3SG.OBJ</td>
</tr>
</tbody>
</table>

D1c)

<table>
<thead>
<tr>
<th>Jak riŋ ene Bill à laa ene e turbfee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack knows 3SG.COMP Bill 3SG.SM say 3SG.INTRO 3SG smart</td>
</tr>
</tbody>
</table>

D1d)

<table>
<thead>
<tr>
<th>Jak ce kwà’ ene Lisà riŋ ene wrndí kòŋ ye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack ASP.CONT think 3SG.COMP Lisà know 3SG.COMP Wendy like 3SG.OBJ</td>
</tr>
</tbody>
</table>

D1e)

<table>
<thead>
<tr>
<th>Jak ce kwà’ e-ne Lisà riŋ e-ne wrndí kòŋ Álir</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack ASP.CONT think 3SG.COMP Lisà know 3SG.COMP 3SG like Alice</td>
</tr>
</tbody>
</table>

D1f)

<table>
<thead>
<tr>
<th>Sërà à mã suŋ Jak ene Lisà kòŋ ye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah 3SG.SM PST3 tell Jack 3SG.INTRO Lisa love 3SG.OBJ Sarah told Jack that Lisa loves X.</td>
</tr>
</tbody>
</table>

D1g)

<table>
<thead>
<tr>
<th>Sërà à mã suŋ Jak ene e kòŋ Wrndí</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah 3SG.SM PST3 tell Jack 3SG.INTRO 3SG love Wendy Sarah told Jack that X loves Wendy.</td>
</tr>
</tbody>
</table>
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 move an argument-marked anaphor into a higher clause.

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 is illustrated in brackets in (X12).

X12a)
Mè kwàshi à rdù
Mè kwàshi à r-ðù
1SG hope INF 1NG-go
I hope [to leave]
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.

D(ii)  Edgar asked Bill to trust X.

a) Edgar gave a book to Bill.

b) Edgar gave a book to Bill.

c) Edgar asked Bill to talk to X.

Edgar asked Bill to talk to X.
c) Edgà à làa nè Bil ene e de’
Edgà à làa nè Bil e-ne e de’
Edgar C1-3SG.SM ask PREP Bill 3SG.SP.INTRO 3SG talk
Edgar asked Bill to talk to X. (X = Bill)

d) Edgà à làa nè Bil ene e suŋ ãmbo ye
Edgà à làa nè Bil e-ne e suŋ ãmbo ye
Edgar C1-3SG.SM ask PREP Bill 3SG.SP.INTRO 3SG talk ADV 3SG.OBJ
Edgar asked Bill to talk about X.

e) Edgà à m kwà’ ene Bil à ba ущеec njep ye
Edgà à m kwà’ e-ne Bil à ba ущеec njep ye
Edgar C1-3SG.SM PST3 expect 3SG.COMP Bill C1.3SG.SM MOD trust PREP 3SG.OBJ
Edgar expected Bill to trust X.

f) Edgà à m làa ene Bil la’ ye
Edgà à m làa e-ne Bil la’ ye
Edgar C1-3SG.SM PST3 3SG.SP.INTRO Bill pay 3SG.OBJ
Edgar ordered Bill to pay X.

g) Edgà à m làa ene Bil làa ene e m turfbée
Edgà à m làa e-ne Bil làa e-ne e m turfbée
Edgar C1-3SG.SM PST3 order 3SG.SP.INTRO Bill say 3SG.SP.INTRO 3SG PST3 smart
Edgar ordered Bill to say that X was smart.

h) Edgà à m làa ene Bil làa ene Meri m kòŋ ye
Edgà à m làa e-ne Bil làa e-ne Meri m kòŋ ye
Edgar C1-3SG.SM PST3 order 3SG.SP.INTRO Bill say 3SG.SP.INTRO Meri PST3 love 3SG.OBJ
Edgar ordered Bill to say that Mary loved X.

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

D5a) Edgà ce kè’ à rsò
Edgà ce kè’ à r-sò
Edgar ASP.CONT expect INF INF-win
Edgar expects X to win.

b) Edgà ce kè’ ene Bil so ye
Edgà ce kè’ e-ne Bil so ye
Edgar ASP.CONT expect 3SG.COMP Bill win 3SG.OBJ
Edgar expects Bill to defeat X.

D6ai) Edgà ce kwàshi à rsò
Edgà ce kè’ à r-sò
Edgar ASP.CONT hope INF INF-win

D6a) Edgà ce kwàshi ene e be so
Edgà ce kwà-shi e-ne e be so
Edgar ASP.CONT hope-PLU 3SG.COMP 3SG FUT1 win
Edgar hopes for X to win.

b) Edgà ce kwàshi ene Bil be so ye
Edgà ce kwà-shi e-ne Bil be so ye
Edgar ASP.CONT hope-PLU 3SG.COMP Bill FUT1 win 3SG.OBJ
Edgar hopes for Bill to defeat X.

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

D7a) Edgà ce kè’ ene Bil so nfùr zhii
Edgà ce kè’ e-ne Bil so nfùr zhii
Edgar ASP.CONT expect 3SG.COMP Bill win brother C1-3SG.POSS.FOC.ADJ
Edgar expects Bill to defeat X’s brother.

b) Edgà ce kwà-shi ene Bil be so nfùr zhii
Edgà ce kwà-shi e-ne Bil be so nfùr zhii
Edgar ASP.CONT hope-PLU 3SG.COMP Bill FUT1 win brother C1-3SG.POSS.FOC.ADJ
Edgar hopes for Bill to defeat X’s brother.
If this is not possible at all, just 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.)

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.).

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.

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.
Edgar X talk instead about Bill.

Comment: Find here the use of focal pronouns and possessives to mark focus.

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.

Comment: Besides serial actions expressed by the use of some verb suffixes, verb serialization is possible in Limbum. The pattern that can be of interest is when independent pronouns function as possessives whereas they do not have any tonal or stress differences. This takes place when the independent pronoun follows the serial verb.

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 coconstrued with Oliver.

D9a) Àmbò ye nè zhii tu à ū̀ vi lër, zhi bep Olivia
ADV 3SG.OBJ PREP C1a-3SG.POSS.HEAD head 1.3SG SM PST3 come late, 3SG SM upset Oliver
As X was late upset Oliver.

b) Àmbò ye nè zhii tu à ū̀ vi lër, zhi dùnshi
Àmbò ye nè zhii tu à ū̀ vi lër, zhi dùnshi
AD 3SG.OBJ PREP C1a-3SG.POSS.HEAD head 1.3SG SM PST3 come late, 3SG SM suggest
zhine Olivia à jàjtee e 3SG.COMP Oliver à jàjtee e 3SG.SM guilty vowel echo
That X was late suggested that Oliver was guilty.

c) Àmbò ye nè zhii tu à ū̀ vi lër, zhi ììì
Àmbò ye nè zhii tu à ū̀ vi lër, zhi ììì
AD 3SG.OBJ PREP C1a-3SG.POSS.HEAD head 1.3SG SM PST3 come late, 3SG SM make Oliver
à ke’ jèjtee C1-3SG SM look guilty
That X was late made Oliver look guilty.

d) Àmbò ye nè zhii tu à ū̀ vi lër, zhi ni nìì
Àmbò ye nè zhii tu à ū̀ vi lër, zhi ni nìì
AD 3SG.OBJ PREP C1a-3SG.POSS.HEAD head 1.3SG SM PST3 come late, 3SG SM enter Oliver à yuu PREP thing.
That X was late implicated 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) E m jàsì Mariam 1SG PST3 criticize Malik
He criticized Malik.

b) E láà én və Mariam à jàsì ye Malik
E láà én və Mariam à jàsì ye Malik
3SG say 3SG.SP.ENV Mariam C1-3SG SM criticize 3SG.OBJ
He said Mariam criticized Malik.

c) E m jàsì muumbaru anà 3SG PST3 criticize boy ANA.DET
He criticized the boy.

d) E láà én və Mariam à jàsì ye muumbaru
E láà én və Mariam à jàsì ye muumbaru
3SG say 3SG.SP.ENV Mariam C1-3SG SM criticize 3SG.OBJ
He said Mariam criticized the boy.

E2a) Zhii ma à jàsì ye Malik
C1a-3SG.Poss.FOC.ADJ motherC1-3SG.SM criticize ye Malik
His mother criticized Malik.

b) Zhi ma à rì làa e-ne Mariàm à
Zhi ma à rì làa e-ne Mariàm à
C1a-3SG.Poss.FOC.ADJ motherC1-3SG.SM PST3 say 3SG.COMP Mariam C1-3SG.SM
jàasi Malik
jàasi Malik
criticize Malik
His mother said Mariam criticized Malik.

c) Zhi ma à rì jàasi ye muumbaŋrù
C1a-3SG.Poss.FOC.ADJ motherC1-3SG.SM PST3 criticize 3SG.OBJ boy
His mother criticized the boy.

d) Zhi ma à rì làa e-ne Meriàm à
Zhi ma à rì làa e-ne Meriàm à
C1a-3SG.Poss.FOC.ADJ mother C1-3SG.SM PST3 say 3SG.COMP Mariam C1-3SG.SM
jàasi ye muumbaŋrù
jàasi ye muumbaŋrù
criticize 3SG.OBJ boy
His mother said Mariam criticized the boy.

E3a)
Déw ce e rì kòŋ à jàasi ye Malik
Man REL 3SG PST3 like C1-3SG.SM criticize 3SG.OBJ Malik
The man who he liked criticized Malik

b) Déw ce e rì kòŋ à jàasi ye muumbaŋrù
Man REL 3SG PST3 like C1-3SG.SM criticize 3SG.OBJ muumbaŋrù
The man who he liked criticized the boy.

c) Déw ce rì kòŋ ye à jàasi ye muumbaŋrù
Man REL PST3 like 3SG.SM C1-3SG.SM criticize 3SG.OBJ muumbaŋrù
The man who liked him criticized the boy.

d) Déw ce rì kòŋ ye à jàasi ye Malik
Man REL PST3 like 3SG.OBJ C1-3SG.SM criticize 3SG.OBJ Malik
The man who liked him criticized Malik

Comment: It is not possible to interpret he/his in E1a and c) as Malik or the boy in Limbum.

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 à rì jàasi Malik
Malik C1-3SG.SM PST3 criticize Malik
Malik criticized Malik,

b) Malik à làa e-ne Meriàm à rì jàasi ye Malik
Malik à làa e-ne Meriàm à rì jàasi ye Malik
Malik C1-3SG.SM say 3SG.SP.INTRO Mariam C1-3SG.SM PST3 criticize 3SG.OBJ Malik
Malik said Mariam criticized Malik.

c) * Muumbaŋrù à rì jàasi muumbaŋrù
Boy C1-3SG.SM PST3 criticize boy
The boy criticized the boy.

d) Muumbaŋrù à làa e-ne Meriàm à jàasi ye
Muumbaŋrù à làa e-ne Meriàm à jàasi ye
Boy C1-3SG.SM say 3SG.SP.INTRO Mariam C1-3SG.SM criticize 3SG.OBJ
Muumbaŋrù
Muumbaŋrù
The boy said Mariam criticized the boy.

E5a) Ma zhi Malik à jàasi Malik

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Comment: Not possible to find anaphoric effects in E4a and c) with Malik/the boy.

Now consider whether the boy = Malik for the following examples

E7a)

Boy C1-3SG.SM PST3 criticize Malik
The boy criticized Malik.

b)

Boy C1-3SG.SM PST3 say 3SG.SP.INTRO Mariam C1-3SG.SM
The boy said Mariam criticized Malik.

c)

Malik C1-3SG.SM PST3 criticize boy ANA.DET
Malik criticized the boy.

d)

Malik C1-3SG.SM PST3 say 3SG.SP.INTRO Mariam C1-3SG.SM
Malik said Mariam criticized Malik.
language is like English, then the reflexive form does not work in the position of X where X = orientation. Which

4.4 More on long distance anaphor strategies

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 à mên suñ Zeke ene Maik kôŋ ye Larry ka’
Larry à mên suñ Zeke e-ne Maik kôŋ ye Larry ka’
Larry told Zeke that Mike does not like X.

b) Zeke à mên suñ Larry ene Maik kôŋ ye Zeke ka’
Zeke à mên suñ Larry e-ne Maik kôŋ ye Zeke ka’
Zeke told Larry that Mike does not like X.

c) Zeke à mên suñ Larry ene ye Zeke kôŋ Maik ka’
Zeke à mên suñ Larry e-ne ye Zeke kôŋ Maik ka’
Zeke told Larry that X does not like Mike.

d) Larry à mên suñ Zeke ene ye Larry kôŋ Maik ka’
Larry à mên suñ Zeke e-ne ye Larry kôŋ Maik ka’
Larry told Zeke that X does not like Mike.

e) Larry rîŋ ene Zeke ke kwâ’ ene Maik kôŋ ye Larry ka’.
Larry rîŋ e-ne Zeke ke kwâ’ e-ne Maik kôŋ ye Larry ka’.
Larry knows that Zeke thinks that Mike does not like X.
f) Zeke riŋ ene Lari ke kwā’ ene Maik kōŋ ye Zeke ka’.  
Zeke riŋ e-ne Lari ke kwā’ e-ne Maik kōŋ ye Zeke ka’.  
Zeke know 3SG.COMP Larry ASP.HAB think 3SG.COMP Mike like 3SG.OBJ Zeke NEG  
Zeke knows that Larry thinks that Mike does not like X.

D12a) Ma zhi Zeke ke kwā’ ene Maik kōŋ ye ka’.  
Ma zhi Zeke ke kwā’ e-ne Maik kōŋ ye ka’.  
Mother C1-3SG.POSS.FOC. ADJ Zeke ASP.HAB think 3SG.COMP Mike like 3SG.OBJ Zeke NEG  
Zeke’s mother thinks that Mike does not like X.

b) Ma zhi Zeke ke kwā’ ene e kōŋ Maik ka’  
Ma zhi Zeke ke kwā’ e-ne e kōŋ Maik ka’  
Mother C1-3SG.POSS.FOC. ADJ Zeke ASP.HAB think 3SG.COMP 3SG like Mike NEG  
Zeke’s mother thinks that X does not like Mike.

c) Zeke ke kwā’ ene Maik ke kōŋ ye ka’  
Zeke ke kwā’ e-ne Maik ke kōŋ ye ka’  
Zeke ASP.HAB think 3SG.COMP Mike ASP.HAB like 3SG.OBJ NEG  
Zeke thinks that Mike does not like X.

d) Ɲwā’ Zeke zhi suŋ zhint Maik kōŋ ye ka’  
Ɲwā’ Zeke zhi suŋ zhi-ne Maik kōŋ ye ka’  
Letter Zeke C1a-3SG.SM say C1a-3SG.SP.INTRO Mike like 3SG.OBJ NEG  
Zeke’s letter said that Mike does not like X.

e) Zeke à m yu’ ene Meri à m kōŋ ye ka’  
Zeke à m yu’ e-ne Meri à m kōŋ ye ka’  
Zeke C1-3SG.SM PST3 hear 3SG.COMP Mary C1-3SG.SM PST3 like 3SG.OBJ NEG  
Zeke heard that Mary did not like X. (if your language permits passive)

D13a) Zeke à m láa ene e sūsī zhīi nyor  
Zeke à m láa e-ne e sūsī zhīi nyor  
Zeke C1-3SG.SM PST3 say 3SG.SP.INTRO 3SG dresss C1-3SG.POSS.SDJ body  
Zeke said that X had dressed X.

b) Zeke à m láa ene e m lē lē nyor  
Zeke à m láa e-ne e m lē lē nyor  
Zeke C1-3SG.SM PST3 say 3SG.SP.INTRO 3SG PST3 wound body  
Zeke said that X had wounded X.

c) Zeke à m láa ene e m wāshī zhīi nyor  
Zeke à m láa e-ne e m wāshī zhīi nyor  
Zeke C1-3SG.SM PST3 say 3SG.SP.INTRO 3SG PST3 tatoo C1-3SG.POSS. ADJ body  
Zeke said that X had tattooed X.

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).

a) Jōn à m suŋ Bīl ene Meri à m crp ye  
Jōn à m suŋ Bīl e-ne Meri à m crp ye  
John C1-3SG.SM PST3 tell Bill 3SG.SP.INTRO Mary C1-3SG.SM PST3 slander 3SG.OBJ  
John related to Bill that Mary had slandered him.

b) Mē tuusi nyo’ Pōl nē Meri ene e du fa nē ye  
Mē tuu-si nyo’ Pōl nē Meri e-ne e du fa nē ye  
1SG send-CAUS book Paul PREP Mary 3SG.COMP 3SG go give PREP 3SG.OBJ  
I sent Paul’s book through Mary so that she would give it to him

4.4.2 Antecedent properties

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.

D11.1a) Ľari à m suŋ mē ene Maik kōŋ ye ka’
I said that X had dressed X.

I heard that Mary did not like X.

Your letter said that Mike does not like X.

You told Larry that X does not like Mike.

I told Larry that Mike does not like X.

Your letter said that Mike does not like X.

I know that Larry thinks that Mike does not like X.

I told Larry that X does not like Mike.

Larry knows that you think that Mike does not like X.

Larry told Larry that Mike does not like X.

My mother thinks that Mike does not like X.

My mother thinks that Mike does not like X.

I think that Mike does not like X.

I heard that Mary did not like X. (if your language permits passive)

I said that X had dressed X.

You said that X had dressed X.
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".

**Jack paradigm D2a**

a) Muu-wewe a m byemi ene Meri kòŋ ye
b) Muu mó’ à m ghàase ene Meri kòŋ ye ka'

c) Boo magòr a m ce kwàshi ane Meri kòŋ woowèe

**Edgar paradigm D4a**

a) Muu-wewe à làa nè Bil ene e turntche njep ye
b) Muu mó’ à làa nè Bil ene e de’ a ye ka’

c) Boo magòr a làa nè Bil ane a suŋ ámbò woowèe

**Zeke paradigm D13**

a) Muu-wewe à m làa ene e sùsì zhìi nyor
b) Muu mó’ à m làa ene e m ìrì nyor ka’
Many children said that X had tattooed X.

Sometimes LDA strategies do not have to have antecedents in the same sentence. For example, in English, (D14d) would be "Ozzie told Harriet that Bill dislikes them," where them would be Ozzie and Harriet.

D14a) *Ozi à mê suñ àmbò Harit nè woowèe.
Ozzie C1-3SG.SM PST3 tell ADV Harriet PREP 3PL.OBJ
Ozzie talked about Harriet to X.

b) Ozi à mê suñ àmbò wàp bu nè Harit
Ozzie C1-3SG.SM PST3 tell ADV C2-3PL.POSS.ADJ C2-heads PREP Harriet
Ozzie talked about X to Harriet.

c) Ozi à mê suñ Harit ene woowèe a ìò.
Ozi à mê suñ Harit ene woowèe a ìò.
Ozzie C1-3SG.SM PST3 tell Harriet 3SG.COMP 3PL 3PL.SM leave
Ozzie told Harriet that X should leave.

d) Ozi à mê suñ Harit ene Bill bàà woowèe
Ozi à mê suñ Harit ene Bill bàà woowèe
Ozzie C1-3SG.SM PST3 tell Harriet 3SG.COMP Bill dislike 3PL.OBJ
Ozzie told Harriet that Bill dislikes X.

e) Ozi à mê làà ene Harit ce kwà’ ene Bill bàà
Ozi à mê làà ene Harit ce kwà’ ene Bill bàà
Ozzie C1-3SG.SM PST3 say 3SG.SP.INTRO Harriet ASP.CONT think 3SG.COMP Bill dislike
woowèe
woowèe
3PL.OBJ
Ozzie said that Harriet thinks that Bill dislikes X.

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) Mak à wèp ene muu zhii yu mbe dì’ bòñboñ ka’.
Mak à wèp ene muu zhii yu mbe dì’ bòñboñ ka’.
Mark C1-3SG.SM fear 3SG.COMP child C1-3SG.POSS.FOC.ADJ be LOC place nice NEG.
Ritu zhi koo ye ene ñòdè’ e tomì nìfùr zhii
Ritu zhi koo ye ene ñòdè’ e tomì nìfùr zhii
Shame C7-3SG.SM catch 3SG.OBJ 3SG.COMP can 3SG support brother C1-3SG.POSS.FOC.ADJ
muuma ka’. B-fùr bvií a be ìa ekr ìbò yè?
muu-ma ka’. B-fùr bvií a be ìa ekr ìbò yè?
mother-child NEG. C2-brothers C2-3SG.POSS.FOC.ADJ 3PL.SM FUT1 say 3SG.COMP.QADV 3SG.OBJ?
Mark feared that his son was not safe. He was ashamed that he could not protect his closest relative. What would his cousins think of him?

D16) Mak à ka’y ye .funshì mbe ńwà’ a kan. Bèè ce a ce
Mak à ka’y ye .funshì mbe ńwà’ a kan. Bèè ce a ce
Mark C1-3SG.SM then see picture LOC paper CONJ shake. People REL 3PL.SM ASP.CONT
tomi ye a be ma’shi ye. E be gèè e-ke ka’ sun
support 3SG.OBJ 3PL.SM FUT1 abandon 3SG.OBJ. 3SG FUT1 make 3SG.COM,Q CONJ tell
zhì mà?
zhì mà?
C1-3SG.POSS.ADJ mother
Mark was shocked to see his picture in the paper. All of his supporters would abandon him. 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) Mòris à làa ene à m ba nòŋ tatap nè Mak
Mòris à làa e-ne à m ba nòŋ tatap nè Mak
Morris C1-3SG.SM say 3SG.SP.INTRO 3SG.SM PST3 be day difficult PREEP Mark
Entombí Mòris à làa nè ye en a zhèè
Entombí Mòris à làa nè ye e-ne a zhèè
First, Morris C1.3SG.SM say PREP 3SG.OBJ 3SG.SP.INTRO 3PL steal
zhìi mutù. Awr, e mà tur à rhyà tàxì te e bo lor
zhìi mutù. Awr, e mà tur à r-hayà tàxì te e bo lor
C1-3SG.POSS.ADJ car Then 3SG PST3 have INF INF-hire taxi CONJ 3SG MOD take
ye dù ágho mbedì rìfà’. Mòris à m kwà’ ene ède ntee
ye dù ágho mbedì rìfà’. Mòris à m kwà’ e-ne ède ntee
3SG.OBJ go ASSO LOC work. Morris 3SG.SM PST3 think 3SG.COMP may heart
zhìi ce yàŋ yè
zhìi ce yàŋ yè
C1a-3SG.SM ASP.CONT worry 3SG.OBJ
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.

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

D18) A: Yè, a Mak nà
Look be Mark DEM.DIS
Look, there's Mark!
B: È bóŋ sè.
3SG handsome INTEN
He is so handsome.
A: Ade’ m nè kòŋ à rba ngwa zhìi ka’.
Ade’ m nè kòŋ à r-ba ngwa zhìi ka’.
Can, 1SG though want INF INF-bewife C1-3SG.POSS.FOC.ADJ NEG.
I would not want to be his wife though.
Bbyëngè-wëwë a ce dù a yé mbùu
B-byëngè-wëwë a ce dù a yé mbùu
C2.women-3PL 3PL.SM ASP.CONT go PREP 3SG.OBJ.POSS behind
All the women are chasing him.
B: Fon mà kwà’ mè-ne e ke nàatu gör
Fon mà kwà’ mè-ne e ke nàtu-gör
Also, 1SG think 1SG.COMP 3SG ASP.HAB praise-head INTEN
Also, I think he praises himself too much.

Comment: The only thing that is not possible is the addition of the possessive in the reflexive praise himself nāatu as the use of body parts will always involve a possessive. The insertion of the object possessive between locative morphemes is optional and can be a ye mbaù or àmbàù ye.

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.

(D19) a) Lari ke kwǎ’shi ene Jón ke wrp ye
Lari ke kwǎ’shi e-ne Jón ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP John ASP.HAB respect 3SG.OBJ.
Larry thinks that John respects X.

b) Lari ke kwǎ’shi ene me ke wrp ye
Lari ke kwǎ’shi e-ne me ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP 1SG ASP.HAB respect 3SG.OBJ.
Larry thinks that I respect X.

c) Lari ke kwǎ’shi ene Merì ke wrp ye
Lari ke kwǎ’shi e-ne Merì ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP Mary ASP.HAB respect 3SG.OBJ.
Larry thinks that Mary respects X.

d) Lari ke kwǎ’shi ene boombaŋrù a ke wrp ye
Lari ke kwǎ’shi e-ne boombaŋrù a ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP C2-boys 3PL.SM ASP.HAB respect 3SG.OBJ.
Larry thinks that the boys respect X.

e) Mbaŋrù a ke kwǎ’shi ane boombaŋrù a ke wrp
Mbaŋrù a ke kwǎ’shi a-ne boombaŋrù a ke wrp
C7-Men 3PL.SM ASP.HAB think-PLU 3PL.COMP C2-boys 3PL.SM ASP.HAB respect
woowè woowèe 3PL.OBJ.
The men think that the boys respect X. (X = the men)

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

(D20) a) Lari ke kwǎ’shi ene Bił řiŋ ene Dav ke wrp ye
Lari ke kwǎ’shi e-ne Bił řiŋ e-ne Dav ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP Bill know 3SG.COMP Dave ASP.HAB fear 3SG.OBJ
Larry thinks that Bill knows that Dave respects X.

b) Lari ke kwǎ’shi ene mì řiŋ mene Dav ke wrp ye
Lari ke kwǎ’shi e-ne mì řiŋ me-ne Dav ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP 1SG know 1SG.COMP Dave ASP.HAB fear 3SG.OBJ
Larry thinks that I know that Dave respects X.

c) Lari ke kwǎ’shi ene Merì řiŋ ene Dav ke wrp ye
Lari ke kwǎ’shi e-ne Merì řiŋ e-ne Dav ke wrp ye
Larry ASP.HAB think-PLU 3SG.COMP Mary know 3SG.COMP Dave ASP.HAB fear 3SG.OBJ
Larry thinks that Mary knows that Dave respects X.

d) Lari ke kwà-shì e-ne boomàbàrù a riŋ a-ne Dav ke wɔp
Lari ke kwà-shì e-ne boomàbàrù a riŋ a-ne Dav ke wɔp
Larry ASP.HAB think-PLU 3SG.COMP C2-boy 3PL.SM know 3PL.COMP Dave ASP.HAB fear ye
ye 3SG.OBJ
Larry thinks that the boys know that Dave respects X.

e) Mbaŋrù a ke kwà-shì e-ne boomàbàrù a riŋ a-ne Dav
Mbaŋrù a ke kwà-shì e-ne boomàbàrù a riŋ a-ne Dav
Larry 3PL.SM ASP.HAB think-PLU 3PL.COMP C2-boy 3PL.SM know 3PL.COMP Dave
d wp woowèè
d wp woowèè
ASP.HAB fear 3PL.OBJ

Comment: Only the independent object pronoun can be used.

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) Waltà ke kwà-shì e-ne Bil à suŋ Harì e-ne Dav ke
Waltà ke kwà-shì e-ne Bil à suŋ Harì e-ne Dav ke
Walter ASP.HAB. think-PLU 3SG.COMP bill C1-3SG.SM tell Harry 3SG.COMP Dave ASP.HAB
wɔp ye
wɔp ye
respect 3SG.OBJ

Larry says that Bill told Harry that Dave respects X.

b) Waltà ke kwà-shì e-ne Bil à suŋ mè e-ne Dav ke
Waltà ke kwà-shì e-ne Bil à suŋ mè e-ne Dav ke
Walter ASP.HAB. think-PLU 3SG.COMP bill C1-3SG.SM tell 1SG 3SG.COMP Dave ASP.HAB
wɔp ye
wɔp ye
respect 3SG.OBJ

Larry thinks that Bill told me that Dave respects X.

c) Waltà à suŋ mè e-ne Dav ke wɔp ye
Waltà à suŋ mè e-ne Dav ke wɔp ye
Walter C1-3SG.SM tell 1SG 3SG.COMP Dave ASP.HAB respect 3SG.OBJ

Walter told me that Dave respects X.

d) Waltà à làa e-ne Dav à fa mè rìpwà’ ambò ye
Waltà à làa e-ne Dav à fa mè rìpwà’ ambò ye
Walter C1-3SG.SM say 3SG.COMP Dave C1-3SG.SM give 1SG book ADV 3SG.OBJ

Walter said that Dave gave me a book about X.

Comment: Only the independent object pronoun can be used.

4.4.4 Islands

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

D22a) Irà ke bàà mwà e Mèri ke bìa ye
Irà ASP.HAB resent fact REL Mary ASP.HAB hate 3SG.OBJ
Irà resent the fact that Mary hates X.

b) Irà ke wɔp ðwè ce e ke kòn ye
Irà ASP.HAB resent man REL 3SG ASP.HAB like 3SG.OBJ
Irà respects the man who likes X.

c) Irà ke làa e-ne rìpwè ce e ke kòn ye turffèe
Irà ke làa e-ne ðwè ce e ke kòn ye turffèe
Irà ASP.HAB say 3SG.SP.INTRO man REL 3SG ASP.HAB like 3SG.OBJ intelligent
Ira says that the man who likes X is intelligent.

d) Ira asked whether Bill saw X.

e) Ira asked when Bill saw X.

f) Ira did not realize that George followed X.

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

Comment: Only the independent object pronoun can still be used here.

4.4.5 De se reading

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.

Comment: In Limbum, interpretive ambiguity is resolved by placing the possessive before or after the verb. When focused i.e for Bio for example, the possessive is placed after the verb. In that case subject is the possessor but when the possessive is placed before the verb, the possessor of the object is another or the object is not BIO. So there is no De se reading in Limbum.

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: Such pronominal distinctions cannot be found in Limbum.