Anaphora in the African Languages - Questionnaire

Introduction

PART 2   An inventory of reflexive and reciprocal strategies

In this section, we compile an inventory of strategies for coreference in Tigrinya. Tigrinya uses a variety of strategies for coreference to express a reflexive and reciprocal relationship. Each of these strategies will be discussed below.

2.1   Coreference in a single clause

2.1.1 "Primary" reflexive strategy –Tigrinya primarily uses reflexive pronouns to express a simple reflexive relationship; reflexive pronouns are formed by juxtaposing the stem *ʕars-* 'self' with the possessive suffixes (this is roughly equivalent to the English self+my= myself type.) This is illustrated in (A1). I refer to this strategy as *ʕars*-STRATEGY.

A1)   joni   ʕars-u   riʔ-u   ʕars-STRATEGY
         John   <u>self</u>-his   saw-3m.sg.SM
         John saw himself.

2.1.2. Tigrinya uses another reflexive pronoun to mark reflexive meaning. This reflexive pronoun is a combination of *baʕl-* and agreement affixes or clitics as illustrated in A2 below. I dubbed this strategy *baʕl-*STRATEGY

A1)   joni   nɨ-ʕars-u   riʔ-u   baʕl-STRATEGY
         John   to-<u>self</u>-his   saw-3m.sg.S
         John saw himself.

Note that whenever the *baʕl*-STRATEGY is used, there is the element *n-* normally translated as 'to' or an accusative or dative Case marker obligatorily prefixing to *baʕl*–. The same element can also attach to the first strategy (*ʕars*-STRATEGY) but in this case *n-* is optional, as illustrated below:

A1)   joni   (nɨ-)ʕars-u   riʔ-u   (n-)ʕars-STRATEGY
         John   (to-)<u>self</u>-his   saw-3m.sg.S
         John saw himself.

2.1.3 Verbs of grooming: Tigrinya does not seem to have a lexical reflexive literally comparable to English *wash, shave, bathe, dress* etc. However, the equivalent of these English reflexive verbs are expressed in Tigrinya by using a morphological device, passive marker, attached on the verb. I'll refer to this strategy PASS-strategy. In Tigrinya, the PASS-strategy is employed to express reflexive reading with grooming verbs. Note, however, that some grooming verbs in Tigrinya may have a different structure compared to their English counterparts. Consider the verb 'dress' first: It can have either a regular reflexive reading like the

English 'Martha dressed.' or can be translated as 'wear' as in 'Martha wore (something unspecified).' These two are illustrated below:

A3)   a.   marta   tə-xədinn-a   PASS-STRATEGY
                Martha PASS-dressed-3f.sg.S
                'Martha dressed.'

        b.   marta   s'ɨbux' kɨdan   tə-xədinna
                Martha nice   dress   PASS-dressed-3f.sg.S
                'Martha dressed a nice dress/cloth.'

Thus, the Tigrinya verb 'dress' is complex in that, it behaves either as a typical transitive verb as in English (e.g., Martha dressed in a beautiful sweater.) or like 'wear or cover' that cannot take a reflexive pronoun object as shown below:

A3)   a.   *marta   ʕars-a   xədinn-a
                Martha   self-her   dressed-3f.sg.S
                'Martha dressed herself/Martha coverd herself.' (cf. *Martha always wore herself.')
        b.   *marta (nɨ-)ʕarsa   xədinn-a
                Martha (to-)self-her   dressed-3f.sg.S
        c.   marta (nɨ-)ʕars-a   tə-xədinn-a
                Martha (to-)self-her   PASS-dressed-3f.sg.S

Tigrinya uses a verbal reflexive strategy with the other verbs of grooming. Verbal reflexives in Tigrinya take different reduplicative forms and morphosyntactic markers, namely, the passive marker tə- to encode reflexivity with self-grooming verbs. Consider the following:

A2)   a   joni   tə-ħas'ib-u   Object-Null-STRATEGY
                John   PASS-washed-3m.sg.SM
                'John washed himself.'

        b.   joni   tə-las'ɨyy-u
                John   PASS-shaved-3m.sg.SM
                'John shaved himself.'

Here since the same passive marker is employed, the reflexive verb may also have a passive interpretation (e.g., John was shaved (by a barber) or washed (by his mother)). Nevertheless, with these verbs ('bathe' and 'shave') whose action normally affects body parts, the preferred reading is that of reflexive. Note that in Tigrinya the reflexive reading is not possible with the present tense/imperfective aspect, such as, "washes".

        c.   meri   tə-s'aħgig-a/ʔid-a   tə-ħarid-a   Object-Null-STRATEGY
                Mary   PASS-cut-3m.sg.SM/hand   PASS-cut.f.sg.SM
                'Mary cut herself/Mary cut her finger herself [accidentally]'
        d.   joni   ħafir-u/ħanix-u   Object-Null-STRATEGY
                John   ashamed-3m.sg.SM

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'John is ashamed of himself.'[1]

e. joni   (nɨ-)ʕars-u   ʔa-ʕənɨy-u/ʔa-bris-u   (n-)ʕars-STRATEGY
    John   (to-)self-his   CAUS-destroyed-3m.sg.SM
    'John destroyed himself.'

    joni   nɨ-baʕl-u   ʔə-ʕnɨy-u/ʔa-bris-u   baʕl-STRATEGY
    John   to-self-his   CAUS-destroyed-3m.sg.SM
    'John destroyed himself.'

f. (nɨħna) nɨʕarsna   nɨ-s'əliʕ   (n-)ʕars-STRATEGY
    (nɨħna) nɨ-ʕars-na   nɨ-s'əliʕ
    we   (to-)self-our   1pl.SM-hate
    'We hate ourselves.'

    (nɨħna) nɨ-baʕl-na   nɨ-s'əliʕ   baʕl-STRATEGY
    we   to-self-our   1pl.SM-hate
    'We hate ourselves.'

g. (nɨsatom)   nɨ-ʕars-atom   yə-mogɨss-u   (n-)ʕars-STRATEGY
    they   (to-)self-their   3m.pl.SM-praise
    'They praise themselves.'

    (nɨsatom)   nɨ-baʕl-atom   yə-mogɨs-u   baʕl-STRATEGY
    they   to-self-their   3m.pl.SM-praise
    'They praise themselves.'

The above inventory of strategies is fully employed in the illustrative examples above.

2.1.4 Obliques and other argument types - Many languages use a different coreference strategy for oblique arguments. In Tigrinya, two different coreference strategies are employed for oblique arguments. These strategies referred to here as CAUS(ATIVE)/PASS(IVE)-STRATEGY and PP-*bizaʕba*–STRATEGY. Since Tigrinya, aprart from the semantic restriction being employed as in English, doesn't seem to have a double object construction, (A3e) is ungrammatical as well.

A3)   a. joni   nɨ-meri   ʔa/tə-zarib-uww-a   CAUS/PASS-STRATEGY
          John   to-Mary   CAUS/PASS-spoke-3m.sg.SM-3f.sg.OM
          'John spoke to Mary.' Or 'John made Mary to speak.'

      b. joni   bɨzaʕba   (ʕars)-u   tə-zaribu   PP-bɨzaʕba-STRATEGY
          John   about   self-his   PASS-spoke-3m.sg.SM
          'John spoke about himself.' (subject/PP argument)

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[1] It is also possible to use the PASS-Reflexive or CAUS-Reflexive strategy combined with the *baʕl-/ʕars*-strategy to encode reflexive meaning with a different verb root that has the same meaning 'ashamed of' as shown below:

(i)   joni   (bəʕarsu/bəʕalu) təwarridu   PASS-STRATEGY
      joni   (bə-ʕars-u/baʕl-u)   tə-warrid-u
      John   by-self-his/self-his   PASS-ashamed-3m.sg.SM
      'John is ashamed of himself.'

(ii) joni   (nɨʕarsu/nɨbaʕlu) ?awarridu   CAUS-STRATEGY
      joni   (nɨ-ʕars-u/nɨbaʕl-u)   ?a-warrid-u
      John   by-self-his/self-his   CAUS-ashamed-3m.sg.SM
      'John is ashamed of himself.

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c.   joni   nɨ-meri bɨzaʕba   (ʕars)-u   nəggir-u-wwa $\boxed{\text{PP-bɨzaʕba STRATEGY}}$

         John   to-Mary about   self-his told-3m.sg.SM-3f.sg.OM

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

d.   joni   (niʕa-na) bɨzaʕba-na/bɨzaʕba (ʕars)-na   nəggir-u-nna $\boxed{\text{PP-bɨzaʕba- STRATEGY}}$

         John   (to-us)   about-us/about self-us   told-3m.sg.SM-1pl.OM

         'John told us about ourselves.' (object/argument)

e.   *meri (n)ə-t-om   k'olʕu (nɨ-)baʕl-atom/-ʕars-atom   hib-a-ttom

         Mery to-D-m.pl   child.pl (to-)self-them/-self-them   ɣave-3f.sg.SM-3m.pl.OM

         *Mary gave the children themselves. (ind.object/object) $\boxed{\text{n-baʕl-/ʕars-STRATEGY}}$

f.   meri   ʔab-diħriʔ-a   (zɨ-nəbər-ə)   məs'ħaf   riʔ-a

         Mary   at-behind-her REL-was-3m.sg   book   saw-3f.sg.SM

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

g.   joni   (n)əti məs'ħaf nɨ-baʕlu/nɨ-ʕarsu gəziʔuwwo $\boxed{\text{n-baʕl-/ʕars-STRATEGY}}$

         joni   (n)ə-t-i   məs'ħaf (nɨ-)baʕl-u/-ʕars-u   gəziʔ-u-wwo

         John   to-D-m.sg   book   (to-)self-his/-self-his bought-3m.sg.SM-3m.sg.OM

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

Tigrinya does not use the reflexive strategy, with things like experiencer-subject verbs, non-nominative subjects, etc., that exhibit unusual argument structures in many languages, except with the verb 'like' as in (A4a). With verbs like 'scare' or 'worry' Tigrinya doesn't seem to make use of any refelexive strategies with all persons.

A4)   a.   eta   nɨ-baʕl-a/(nɨ-)ʕars-a   tɨ-fətt-u

           Etta   to-self-her/(to-)self-her   3f.sg.SM-like-sg.SM

           'Etta likes herself.'

     b. ?*   eta   nɨ-baʕl-a/(nɨ-)ʕars-a   tɨ-fərɨħ

           Etta   to-self-her/(to-)self-her   3f.sg.SM-scare

           Int. 'Etta scares herself.

     c. ?*   eta   nɨ-baʕl-a/(nɨ-)ʕars-a   tɨ-tʃ'ɨnəx'

           Etta   to-self-her/(to-)self-her   3f.sg.SM-worries

           Int. 'Etta worries herself.

2.1.5 Person and number - Some languages use different strategies depending on person or number. In Tigrinya, the same strategies mentioned above are used with all persons and numbers as the following examples illustrate:

A5)   a.   nɨ-baʕl-əy/(nɨ-)ʕars-əyriʔ-ə

           to-self-me/(to-)self-me   saw-1sg.SM

           'I saw myself.'

     b.   nɨ-baʕl-xa/(nɨ-)ʕars-xak'oris'-ka/ħarid-ka

           to-self-your/(to-)self-your   cut-3m.sg.SM

           'You cut yourself [accidentally].'

     c.   (nɨ-)baʕl-na/(nɨ-)ʕars-na   kɨ-n-ħas'ɨb-i-nna

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       (to-)self-our/(to-)self-our   FUT-1pl.SM-wash-be-1pl.SM
       'We will wash ourselves.'

d.   nɨ-baʕl-xum/(nɨ-)ʕars-xum   ħargz-u
       to-self-your.m.pl/(to-)self-your.m.pl help-2m.pl.SM
       'You must help yourselves.'

Tigrinya is both a subject and an object drop language with affixes coreferenceing both the subject and the object always being indicated on the verb; but as long as the use of reflexives is concerned, there is some variation. The optionality of reflexive pronouns sometimes gives rise to a different interpretation. For instance, in (A5a), if we drop the reflexive pronoun the interpretation becomes "I saw" and the same is true with the other contructions. This could, however, be unsurprising given the pro-drop nature of Tigrinya. Note also that whie the same common (nɨ-)baʕlu/(nɨ-)ʕarsu STRATEGIES with optional *(n-)* mentioned above are used with all persons and numbers, there is a strong preference towards avoding *(n-)* with the 'wash' verb type in (A5c) altogether.

2.1.6 Strategies for other clausemate environments -

  (a) Is there any strategy which is only possible with some special aspectual class of a verb?
It's not entirely clear to me but Tigrinya does not allow reflexives in the imperfective aspect with verbs like "know" as the following example illustrates:

A6a) *   peter   nɨbaʕlu/nɨʕarsu yɨfəlɨt'
       Peter   nɨ-baʕl-u   /(nɨ-)ʕarsu   yɨ-fəlit'
       Peter   to-self-his   /(to-)self   3m.sg.SM-knows
       'Peter knows himself.'

Also, the reflexive strategies used to mark these verbs is the same except that the verbs take a causative-form. Note that the CAUS marker (*ʔa-*) often doesn't appear on the surface for phonological reasons (e.g., haplology).

b.   peter (kuluʃaʕ) nɨ-baʕl-u/(nɨ-)ʕars-u   yɨ-nək'ɨf
       peter (habitually)   to-self-his/(to-)self-his   3m.sg.SM.CAUS-criticize
       'Peter (habitually) criticizes himself.'

c.   peter (nɨ-)baʕl-u/(nɨ-)ʕars-u   z-ə-mogɨs   kɨxəwɨn   yɨ-xʔɨl
       peter (to-)self-his/(to-)self-his   REL-3m.sg.SM.CAUS-prise likely   3m.sg.SM-can
       'Peter is likely to praise himself.'

  (b) Do quantificational constructions involve a separate strategy? No, not in Tigrinya; as we can see from the following examples, the (nɨ-)baʕl-/ʕars-strategy which is independently used or combined with the PASS/CAUS-strategies is commonly employed with verbs such as 'look at, help, introduce to' but not with verbs such as 'describe to.'

A7a)   ħɨdħɨd kolʕa nɨ-baʕl-u/(nɨ-)ʕars-u riʔ-u   `baʕl/ʕars-STRATEGY`
       every child   to-self-his/(to-)self-his saw-3m.sg.SM
       'Every boy looked at himself.'

b) ?* kullən ʔɨt-ən ʔansti nɨ-joni nɨ-baʕlat-ən/nɨ-ʕarsat-ən gəlis'-ənnəʔ-o
      all   D-f.pl   women to-John to-self-them/to-self-them   described-3f.pl.SM-3m.sg.OM
      'All the women described John to themselves.'

c) ? ħɨdħid məmhir ʕars-u/baʕl-u nɨ-bob ʔa-falit'-u
      every   teacher   self-his/self-his   to-Bob CAUS-introduced-3m.sg.SM
      'Every teacher introduced himself to Bob.'

d) gəllə k'olʕu t'ɨraħ ʕars-atom/baʕl-atom yɨ-hɨgɨz-u
     some   children   only   self-them/self-them   3m.SM-help-pl.
     '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? Tigrinya has grammaticalized honorifics. Usually, it is the third or second person plural pronouns that serve as an expression of honorifics. However, the strategy for reflexives remains the same, as illustrated below.[2]

A1) nɨssom (nɨ)ʕars-om riʔom   (n-)ʕars-STRATEGY
      nɨssom (nɨ-)ʕars-om riʔ-om
      he.hon (to-)self-them saw-3m.pl.SM
      'He (honorifics) saw himself.'

A1) nɨssɨxum (nɨ-)baʕl-kum riʔ-kum   baʕl-STRATEGY
      you.hon (to-)self-his saw-3m.sg.SM
      'You (honorifics) saw yourselves.'

  (d) The above were all tensed main clauses. In Tigrinya placing both coreferring arguments in various types of subordinate clauses (e.g., tensed complements, subjunctives, infinitivals, purpose clauses, or any other embedding construction) does not bring any difference in the reflexive strategy as the examples in A9 illustrate. Note however that in Tigrinya the reflexive reading is not always possible with the present tense/imperfective aspect with verbs like "wash" (see section 2.1.3 for discussion).

A9a) sol ales (nɨ-)ʕars-u kəm-tɨ-fətt-u yɨ-zarəb   (n-)ʕars-STRATEGY
      Sol Alice (to-)self-his COM-3m.sg.SM-like-f.sg 3m.sg.SM-speak
      sol ales (nɨ-)baʕl-a kəm-tɨ-fətt-u yɨ-zarəb   (n-)baʕl-STRATEGY
      Sol Alice (to-)self-his COM-3m.sg.SM-like-f.sg 3m.sg.SM-speak
      'Sol says that Alice loves herself.'

b) sol ales (nɨ-)ʕars-a kɨ-tə-mogɨs t'əlib-u   (n-)ʕars-STRATEGY
      Sol Alice (to-)self-her COM-PASS-3m.sg.SM-praise-f.sg required-3m.sg.SM

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[2] Tigrinya sometimes employs the middle type strategy with some verbs such as 'see' to encode reflexive relation (e.g. /təməlkit-om/see-3m.pl.SM/ 'saw themselves'). However, middles in Tigrinya have the same morphological form as passives and they can be grouped under the Pass-strategy already introduced ealier.

sol	ales	nɨbaʕla	kɨtəmogɨs	t'əlibu	(n-)baʕl-STRATEGY
sol	ales	(nɨ-)baʕl-a	kɨ-tə-mogɨs		t'əlib-u
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		required-3m.sg.SM

'Sol required that Alice praise herself.'

c)
sol	ales	(nɨ-)ʕars-a	kɨ-tə-mogɨs		(n-)ʕars-STRATEGY
Sol	Alice	(to-)self-his	COM-PASS-3m.sg.SM-praise-f.sg		
		kəm-z-əllə-wwa		t'əlib-u	
		COM-REL-HAVE-3f.sg.SM		required-3m.sg.SM	
sol	ales	(nɨ-)baʕl-a	kɨ-tə-mogɨs		(n-)baʕl-STRATEGY
Sol	Alice	(to-)self-his	COM-PASS-3m.sg.SM-praise-f.sg		
		kəm-z-əllə-wwa		t'əlib-u	
		COM-REL-HAVE-3f.sg.SM		required-3m.sg.SM	

Sol thought Alice should praise herself.

d)
sol	ales	(nɨ)ʕarsa	kɨtəmogɨs	ħatitu	(n-)ʕars-STRATEGY
sol	ales	(nɨ-)ʕars-a	kɨ-tə-mogɨs		ħatit-u
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		asked-3m.sg.SM
sol	ales	nɨbaʕla	kɨtəmogɨs	t'əlibu	(n-)baʕl-STRATEGY
sol	ales	(nɨ-)baʕl-a	kɨ-tə-mogɨs		ħatit-u
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		asked-3m.sg.SM

Sol asked Alice to praise herself.

e)
sol	(nɨ)ʕarsu	kəmogɨs	yɨdəlɨy		(n-)ʕars-STRATEGY
sol	(nɨ-)ʕars-a	kə-mogɨs		yɨ-dəlɨy	
Sol	(to-)self-her	COM-3m.sg.SM-praise-f.sg		3m.sg.SM-want	
sol	(nɨ)baʕla	kəmogɨs	yɨdəlɨy		(n-)baʕl-STRATEGY
sol	(nɨ-)baʕl-a	kə-mogɨs		yɨ-dəlɨy	
Sol	(to-)self-her	COM-3m.sg.SM-praise-f.sg		3m.sg.SM-want	

Sol wants to praise himself.

f)
sol	ales	(nɨ)ʕarsa	kɨtəmogɨs	yɨtəsfɨw	(n-)ʕars-STRATEGY
sol	ales	(nɨ-)ʕars-a	kɨ-tə-mogɨs		yɨ-təsfɨw
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		3m.sg.SM-expect
sol	ales	nɨbaʕla	kɨtəmogɨs	yətəsfɨw	(n-)baʕl-STRATEGY
sol	ales	(nɨ-)baʕl-a	kɨ-tə-mogɨs		yə-təsfɨw
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		3m.sg.SM-expect

Sol expects Alice to praise herself.

g)
sol	ales	(nɨ)ʕarsa	kɨtəmogɨs	səmiʕuwwa	(n-)ʕars-STRATEGY
sol	ales	(nɨ-)ʕars-a	kɨ-tə-mogɨs		səmiʕ-u-wwa
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		heard-3m.sg.SM-3f.sg.OM
sol	ales	nɨbaʕla	kɨtəmogɨs	səmiʕuwwa	(n-)baʕl-STRATEGY
sol	ales	(nɨ-)baʕl-a	kɨ-tə-mogɨs		səmiʕ-u-wwa
Sol	Alice	(to-)self-her	COM-PASS-3m.sg.SM-praise-f.sg		heard-3m.sg.SM-3f.sg.OM

Sol heard Alice praising herself.

2.2 Ordinary (potentially independent) pronouns

In Tigrinya, pronouns can appear independently on their own or as affixes attached to a hosting head, co-referncing an antecedent; for example, independent pronouns, such as, *nɨ́ssu* 'he' can be used without an antecedent as illustrated by A10a referring to a 3msg subject different from Abraham. However, the same pronoun in A10a can also refer to Abraham, the antecedent; in that respect, A10a is ambiguous. Note that the most natural way to express the same construction is by having the second clause embedded (normally as a relative clause in Tigrinya) under the first clause (e.g., I spoke with Abraham who saw Lela yesterday). Depedent pronouns on the other hand, appear attaching to the host verb and often show morphological variation depending on the type of aspect or mood involved. For instance, in A10a the affix *-ə* co-references the subject omitted due to pro-drop 'I', while the affix *–u* co-rferences to Abraham as a subject. Similarly, objective pronouns such as *niʕiʔu/ niʕay/ niʕana* 'him/me/us' can (in)dependently exist even though they require an antecedent as A10b, c illustrate. Note again that the use of independent pronouns such as *nɨ́ssu* 'he' in A10b is still grammatical but renders the construction ambiguous between 'he' referring to 'Abraham' and somebody else. The same is not true with A10c, however.

A10a) nɨʔabraham   tɨmali   ʔazaribəyyo.
       nɨ-ʔabraham   tɨmali   ʔazarib-ə-yyo.
       to-Abraham   yesterday   spoke.1sg.SM-3m.sg.OM

               nɨ́ssu   nɨlela riʔuwwa
               nɨ́ssu   nɨ-lela riʔ-u-wwa
               he   to-Lela saw-3m.sg.SM-3f.sg.OM
       I spoke with Abraham yesterday. He saw Lela.

   b) ʔabraham   ʔabəy ʔallo?   (nɨ́ʕɨʔu) ʔab   ʕɨdaga riʔəyyo   nəyrə
       ʕabraham   ʔabəy ʔall-o   (nɨ́ʕɨʔu) ʔab   ʕɨdaga riʔ-ə-yyo   nəyr-ə
       Abraham   where exist-3m.sg.OM(him) at   market saw-1sg.SM-3m.sg.OM
       Where is Abraham? I saw him in the market.

   c) (nɨħna nɨ́ʕaxa)riʔnaka.   (nɨ́ssɨxa)*nɨħna/*ʔanə   nɨʕana/nɨ́ʕay
       (nɨħna nɨ-ʕaxa)   riʔ-na-ka.   (you) *nɨħna/*ʔanə   nɨ-ʕana/nɨ-ʕay
       we   to-you saw-1pl.SM-2m.sg.OM   (you) *we/*I   to-us/to-me
                      riʔxana/riʔxanni-do   ?
                      riʔ-xa-na/riʔ-xa-nni-do?
                      saw-2m.sg.SM-1pl.OM/saw-2m.sg.SM-1sg.OM
       We saw you. Did you see me/us?

2.2.2. Agreement/Clitic Pronouns: Tigrinya allows clitic or agreement pronouns that always attach as affixes to the verb. Clitic/Agreement pronouns can be prefixes or suffixes or both depending on the type of Aspect involved on the verb. As in other Semitic languages, verbs in Tigrinya display two morph-syntactic patterns, based on aspectual opposition – perfective and imperfective aspect. Variation in the position of agreement/clitic pronouns is particularly true with subject agreement/clitic pronouns, as the following paradigms illustrate: (Note that I am referring those pronominal affixes as clitics or agreement pre-

theoretical)

A11)   Perfective Subject Agreement/Clitic Pronouns

Person	Number	Ind. Subj Pron	Dept Subj. Pro	Verb + Ind Subj. Pro	Gloss
1	Singular	ʔanə	-ə/ku	səbə/ir-ə/ku	'I broke'
2m	Singular	nɨssɨxa	-ku	səbə/ir-ka	'you broke'
2f	Singular	nɨssɨxi	-ki	səbə/ir-ki	'you broke'
3m	Singular	nɨssu	-ə/u	səbə/ir-ə/u	'he broke'
3f	Singular	nɨssa	-a	səbə/ir-a/ət	'she broke'
1	Plural	nɨħna	-na	səbə/ir-na	'we broke'
2m	Plural	nɨssɨxatɨkum	-kum	səbə/ir-kum	'you broke'
2f	Plural	nɨssɨxatɨkɨn	-kɨn	səbə/ir-kɨn	'you broke'
3m	Plural	nɨssatom	-om/u	səbə/ir-u/om	'they broke'
3f	Plural	nɨssatən	-a/ən	səbə/ir-a/ən	'they broke'

A11) Imperfective Subject Agreement/Clitic Pronouns

Per&Gen	Number	Ind. Subj Pron	Dept. Subj. Pro	Verb + Ind Subj. Pro	Gloss
1	Singular	ʔanə	ʔ-	ʔɨ-səbɨr	'I break'
2m	Singular	nɨssɨxa	t-	tɨ-səbɨr	'You break'
2f	Singular	nɨssɨxi	t-…-i	tɨ-səbr-i	'You break'
3m	Singular	nɨssu	y-	yɨ-səbɨr	'He breaks'
3f	Singular	nɨssa	t-	tɨ-səbɨr	'She breaks'
1	Plural	nɨħna	n-	nɨ-səbɨr	'We break'
2m	Plural	nɨssɨxatɨkum	t-…-u	tɨ-səbr-u	'You break'
2f	Plural	nɨssɨxatɨkɨn	t-…-a	tɨ-səbr-a	'You break'
3m	Plural	nɨssatom	y-… -u	yɨ-səbr-u	'They break'
3f	Plural	nɨssatən	y- …-a	yɨ-səbr-a	'They break'

Object (both direct and indirect) agreement/clitic pronouns in Tigrinya consistently appear as suffixes regardless of the aspectual opposition in the verb. They always appear following the subject agreement/subject pronouns on the verb if the full object noun phrase is definite. In Tigrinya, although both the direct and indirect object agreement/clitic pronouns have the same form, only one of them is expressed on the verb. That is, if both direct and indirect objects occur in a construction, it is always the indirect object that is expressed as a suffix on the verb (never both). The full paradigms with both perfect and imperfect verb forms are given below. Note the object agreement/clitic pronouns are bolded and a 3rd person masculine singular subject is used throughout for ease of presentation.

A13) Perfective Object Agreement/Clitic Pronouns

9

Per&Gen	Number	Ind. Obj Pron	Object Pro	Verb + Ind Subj. +Obj Pro	Gloss
1	Singular	niʕʔay	-nni	səbər-ə-**nni**	'He broke me'
2m	Singular	niʕʔaxa	-ka	səbər-ə-**ka**	'He broke you'
2f	Singular	niʕʔaxi	-ki	səbər-ə-**ki**	'He broke you'
3m	Singular	niʕʔu	-o	səbər-ə-**o**	'He broke him'
3f	Singular	niʕaʔa	-a	səbər-ə-**a**	'He broke her'
1	Plural	niʕʔna	-na	səbər-ə-**na**	'He broke us'
2m	Plural	niʕʔxatikum	-kum	səbər-ə-**kum**	'He broke you'
2f	Plural	niʕʔxatikin	-kɨn	səbər-ə-**kin**	'He broke you'
3m	Plural	niʕʔatom	-om	səbər-ə-**om**	'He broke them'
3f	Plural	niʕʔatən	-ən	səbər-ə-**ən**	'He broke them'

A13)   Imperfective Object Agreement/Clitic Pronouns

Per&Gen	Number	Ind. Obj Pron	Dep Object Pro	Dep Sub Pro+Verb + Dep Obj. Pro	Gloss
1	Singular	niʕʔay	-nni	y**ɨ**-səbr-ə-**nni**	'He breaks/is breaking me'
2m	Singular	niʕʔaxa	-kka	y**ɨ**-səbr-ə-**ka**	'He breaks/is breaking you'
2f	Singular	niʕʔaxi	-kki	y**ɨ**-səbr-ə-**ki**	'He breaks/is breaking you'
3m	Singular	niʕʔu	-o	y**ɨ**-səbr-**o**	'He breaks/is breaking him'
3f	Singular	niʕaʔa	-a	y**ɨ**-səbr-**a**	'He breaks/is breaking her'
1	Plural	niʕʔna	-nna	y**ɨ**-səbr-ə-**nna**	'He breaks/is breaking us'
2m	Plural	niʕʔxatikum	-kkum	y**ɨ**-səbr-ə-**kkum**	'He breaks/is breaking you'
2f	Plural	niʕʔxatikin	-kkɨn	y**ɨ**-səbr-ə-k**kin**	'He breaks/is breaking you'
3m	Plural	niʕʔatom	-om	y**ɨ**-səbr-**om**	'He breaks/is breaking them'
3f	Plural	niʕʔatən	-ən	y**ɨ**-səbr-**ən**	'He breaks/is breaking them'

Possession is also expressed by pronominal suffixes in Tigrinya. These are attached either to the noun (regardless of whether the noun is masculine or feminine or plural or singular) or to a possessive marker *nat-* (*nay* is an independent form while *nat-* is a bound form). Morphological variability of the possessive pronominals often exhibts due to phonological processes, namely, whether the noun ends in a consonant (e.g., *səb* 'person/human' or in a vowel (e.g., *dərho* 'chicken'). The full paradigm is given below:

A11)   Possessive Agreement/Clitic Pronouns with possessed N

Per&Gen	Number	Dep Poss Pro	Noun+ Dep Poss. Pro	Gloss
1	Singular	-(ə)y	məsˈħaf-əy	'my book'
2m	Singular	-ku	məsˈħaf-ka	'your book'
2f	Singular	-ki	məsˈħaf-ki	'your book'
3m	Singular	-u	məsˈħaf-u	'his book'
3f	Singular	-a	məsˈħaf-a	'her book'
1	Plural	-na	məsˈħaf-na	'our book'
2m	Plural	-kum	məsˈħaf-kum	'your book'
2f	Plural	-kɨn	məsˈħaf-kɨn	'your book'
3m	Plural	-om	məsˈħaf-om	'their book'
3f	Plural	-ən	məsˈħaf-ən	'their book'

A11)   Possessive Agreement/Clitic Pronouns with *nay/nat-*

Per&Gen	Number	Dep Poss Pro	*nat/nay*+ Poss. Pro	Gloss
1	Singular	-(ə)y	nay/t-əy	'mine'
2m	Singular	-ku	nay/t-ka	'yours'
2f	Singular	-ki	nay/t-ki	'yours'
3m	Singular	-u	nay/t-u	'his'
3f	Singular	-a	nay/t-a	'hers'
1	Plural	-na	nay/t-na	'ours'
2m	Plural	-kum	nay/t-kum	'yours'
2f	Plural	-kɨn	nay/t-kɨn	'yours'
3m	Plural	-om	nay/t-om	'theirs'
3f	Plural	-ən	nay/t-ən	'theirs'

Summarizing: Tigrinya uses both independent and dependent pronouns. While independent pronouns can exist on their own, dependent pronouns cannot and must appear as agreement enclitcs or affixes attached to verbs nouns or other relational heads. The general phenomena of Tigrinya agreement affix or enclitics is further discussed in the following subsection

2.2.3. Null arguments –

Tigrinya is a pro-drop language and arguments can be phonetically empty because they can be recovered from the agreement affixes attached onto the verb. The verb always obligatorily bears the subject agreement affix, and as a result, the subject can be droppable as illustrated below.

A15) a.   nɨssu   məs'iʕu
                nɨssu   məs'iʕ-u
                he   came-3m.sg.SM
                'He came.'
      b.   məs'iʕu
                məs'iʕ-u
                came-3m.sg.SM
                'He came.'

The verb also attaches direct or indirect object agreement/clitic pronouns; however, the appearance of the direct or indirect object agreement/clitic pronouns is dependent on definiteness or specificity; only when the direct or indirect object of the verb is definite that we observe object agreement marking obligatorily attached on the verb (cf. typical differential object marking language in the sense of Assien 2002). Since the definite or specific object is recoverable from the verb object pronominal marking, the object can also be droppable in Tigrinya. Tigrinya is threfoere both a subject and object pro-drop language; i.e., the subject and object can be dropped and the verb along with its accompanying agreement pronoun can independently form a sentence. The following examples illustrate the facts. Note that I am just using 3rd person masculine singular pronoun to illustrate the point, otherwise, the phenomenon applies equally to all other pronouns.

A16)   a.   nɨssu   nəti   ʔɨnjəra bəliʕuwwo
                    nɨssu   nə-t-i   ʔɨnjəra bəliʕ-u-wwo
                    he   ACC-D-m.sg   injera   ate-3m.sg.SM-3m.sg.OM
                    'He ate/has eaten the injera.'
          b.   nəti   ʔɨnjəra bəliʕuwwo
                    n-ət̪-i   ʔɨnjəra bəliʕ-u-wwo
                    ACC-D-m.sg   injera   ate-3m.sg.SM-3m.sg.OM
                    'He ate/has eaten the injera.'
          c.   bəliʕuwwo
                    bəliʕ-u-wwo
                    ate-3m.sg.SM-3m.sg.OM
                    'He ate/~~has eaten~~ it.'

The same pro-drop phenomenon is observed with other verbs as well, as the following examples illustrate:

A17)   e.   joni   wəx'iʕuwwo
                    joni   wəliʕ-u-wwo
                    John   hit-3m.sgSM-3m.sg.OM
                    'John hit him.'
          b.   joni   ʔazaribuwwo
                    joni   ʔazarib-u-wwo

John   talked-3m.sgSM-3m.sg.OM
'John talked to him/caused him to talk.'

Note that in (A17) the subjects can also be dropped, and the sentences still remain grammatical.

2.2.4 The use of otherwise independent pronouns for clausemate anaphora

Tigrinya does not use simple pronouns for a reflexive reading; rather the other common strategies we observed above are employed to express reflexive relationship as the comparison between examples given in (A18a-c) and (A18g-p) illustrates.

A10g)   ʕali   nɨʕɨʔu   ʔamogisuwwo
        ʕali   nɨ-ʕɨʔu ʔamogis-u-wwo
        ali   to-him   praised-3m.sg.SM-3m.sg.OM
        'Ali praised him.'
     h) ʕali   nɨʕɨʔu   fəttiyuwwo
        ʕali   nɨ-ʕɨʔu fəttiy-u-wwo
        Ali   to-him   liked-3m.sg.SM-3m.sg.OM
        'Ali liked him.'
     i) ʕali   nɨʕɨʔu   riʔuwwo
        ʕali   nɨ-ʕɨʔu riʔ-u-wwo
        Ali   to-him   saw-3m.sg.SM-3m.sg.OM
        'Ali saw him.'
     j) ʕali   nɨʕɨʔu   ʔazaribuwwo
        ʕali   nɨ-ʕɨʔu ʔazarib-u-wwo
        Ali   to-him   talked-3m.sg.SM-3m.sg.OM
        'Ali talked to him/made him talk.'
     k) ʕali   nɨʕɨʔu   məsˈħaf   sədidullu
        ʕali   nɨ-ʕɨʔu məsˈħaf   sədid-u-llu
        Ali   to-him   book   sent-3m.sg.SM-3m.sg.OM
        'Ali sent a book to him.'
     l) ʕali   nɨʕɨʔu   ħagizuwwo
        ʕali   nɨ-ʕɨʔu ħagiz-u-wwo
        Ali   to-him   helped-3m.sg.SM-3m.sg.OM
        'Ali helped him.'
     m) ʕali   nɨʕɨʔu   ʔagrimullu
        ʕali   nɨ-ʕɨʔu ʔagrim-u-llu
        Ali   to-him   surprised-3m.sg.SM-3m.sg.OM
        'Ali surprised him.' or '**Ali surprised himself**.' Or 'Him **surprised to Ali**.'
     n) ʕali   nɨʕɨʔu   məsˈħaf   gəziʔullu
        ʕali   nɨ-ʕɨʔu məsˈħaf   gəziʔ-u-llu
        Ali   to-him   book   bought-3m.sg.SM-3m.sg.OM
        'Ali bought a book for him.'
     o) ʕali   bɨzaʕbɨʔu   məsˈħaf   ʔanbibu
        ʕali   bɨ-zaʕbɨʔ-u   məsˈħaf   ʔanbib-u

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	Ali	by-thing-him	book	read-3m.sg.SM

'Ali read a book about him.' or '**Ali read a book about himself**.'

p)	ʕali	ʔabtˈɨxˈɨʔu	məsˈħaf	rəxibu
	ʕali	ʔab-tˈɨxˈɨʔ-u	məsˈħaf	rəxib-u
	Ali	at-near-him	book	found-3m.sg.SM

'Ali found a book near him.' or '**Ali found a book near himself= him**.'

In Tigrinya, except (A18m, o, p), none of the above examples are acceptable if the pronoun 'him' *refers to* or *anteceded by* 'Ali.' In all these cases, 'him' must refer to somebody else, other than Ali. There are some exceptions to this, however. In (A18m, o, p), 'him' can refer to 'Ali'. Note that the verb 'surprise' in Tigrinya results in a different interpretation (e.g., Ali got surprised) whenever the reflexive pronoun is not involved.

2.3 Reciprocal Readings

So far, we have seen that Tigrinya uses a number of strategies to mark reflexive relationship or anaphoric co-reference. Among these different strategies, the PASS/CAUS-*bəʕal-*/*ʕars-* STRATEGIES, the use of a passive marker *tə-* or a causative *ʔa–* attaching on the verb in conjunction with reflexive pronouns *bəʕal-* or *ʕars-* 'SELF', are the most common ones.

In Tigrinya, the PASS-STRATEGY without the reflexives *bəʕal-*/*ʕars-* is also used to encode reciprocal meaning. I refer to this strategy as the PASS-STRATEGY hereafter. The name is given simply to signify the idea that Tigrinya uses reflexive derivation with transitive verbs and that the passive marker *t(ə)-* along with a verb accompanied by argument markers is used to derive the reflexive reciprocal meaning. The following is an illustrative example:

2.3.1 Reciprocal reading

ʔɨtom	təmaharo	təmagwitom/təxatiʕom	PASS-STRATEGY
ʔɨt-om	təmaharo	tə-magʷit-om/tə-xatiʕ-om	
D-m.pl	students	PASS-argue-3m.pl.SM	

'The students argued (with each other).'

Note however that this strategy can also refer to simple passive meaning if a proper context is created for it.

2.3.2 **Other Reciprocal strategies**

Tigrinya also uses two other independent strategies in combination with those discussed above to express reciprocal reading: (i) a reduplicated form of the quantificational elements such as the numeral one (*ħadə* 'one') or the pronoun *nɨss-* accompanied by the passive marker *tə-* prefixed to the verb, and (ii) a reduplicated form of the quantificational elements such as the numeral one (*ħadə* 'one') or the pronoun *nɨss-* accompanied by the passive marker *tə-* prefixed to the **reduplicated** verb. I refer to the first strategy as a reciprocal-1 strategy (REC-1-STRATEGY in short) and the second as REC-2-STRATEGY. Note that sometimes there is a semnatic difference between the two strategies: while Rec-2-strategy refers to an action that happens multiple times, Rec-1-strategy only involves a single event.

A11)   REC-1-STRATEGY

a.   Ɂɨtən   Ɂansti   (nənɨ)ħɨdħɨdən/nɨssnɨssatən   yɨrəɁayyaɁalləwwa
        Ɂɨt-ən   Ɂansti   (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssat-ən   yɨ-ø-rəɁayy-a-Ɂallə-wwa
        D-f.pl   women(to-to-)one-one-them/pro-pro-them   3pl.SM-PASS-see-f-be-3sg.SM
        'The women see each other.'

b.?   Ɂɨtom   Ɂawədat   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   yɨħsˤəbuɁalləwwu
        Ɂɨt-om   Ɂawədat   (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   yɨ-ħsˤəb-u-Ɂallə-wwu
        D-f.pl   boys   (to-to-)one-one-them   3pl.SM-wash-m-be-3m.pl.SM
        'The boys wash each other.'

c.   Ɂɨtom   səbɁut   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   (tʃʼəgurom)   təməʃitʼom
        Ɂɨt-om   səbɁut   (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   (tʃəgur-om)   tə-məʃitʼ-om
        D-f.pl   men   (to-to-)one-one-them/pro-pro-them   hair-their   PASS-combed RED.-3f.pl.OM
        'The boys combed each other's hair.'

d.   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   təmagʷitom/təxatiʕom
        (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   tə-magʷit-om/tə-xatiʕ-om
        (to-to-)one-one-them/pro-pro-them   PASS-argued-3f.pl.OM
        'They argued with each other.'

e.   Ɂɨtom   Ɂawədat   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   təragiħom (middle passive)
        Ɂɨt-om   Ɂawədat   (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   tə-ragiħ-om
        D-f.pl   boys   (to-to-)one-one-them/pro-pro-them   PASS-kicked-3f.pl.OM
        'The boys kicked each other.'

f.   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   təsˤaliɁom[3]
        (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   tə-sˤaliɁ-om
        (to-to-one-one-them/pro-pro-them   PASS-hate-3f.pl.OM (middle passive)
        'They hate each other.'

A11)   REC-2-STRATEGY

a.   Ɂɨtən   Ɂansti   (nənɨ)ħɨdħɨdən/nɨssnɨssatən   yɨraɁaɁayya
        Ɂɨt-ən   Ɂansti   (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssat-ən   yɨ-ra**Ɂa**Ɂ**a**yy-a
        D-f.pl   women(to-to-)one-one-them/pro-pro-them   3f.pl.SM-PASS-see.RED-f
        'The women see each other.'

b.   Ɂɨtom   Ɂawədat   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   təħasˤasˤibom
        Ɂɨt-om   Ɂawədat   (nənɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   tə-ħa**sˤa**sˤib-om
        D-f.pl   boys   (to-to-)one-one-them   PASS-washed-3f.pl.OM
        'The boys washed each other.'

c.   Ɂɨtom   səbɁut   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   (tʃəgurom)   təməʃaʃitʼom
        Ɂɨt-om   səbɁut   (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom   (tʃəgwr-om)   tə-məʃa**ʃ**itʼ-om

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[3] The verb 'hate' is usually expressed with the negated verb 'like' in Tigrinya; so, it is more appropriate to say 'not like each other' instead of 'hate each other' as illustrated below:

(i)   (nənɨ)ħɨdħɨdom/nissnissatom   Ɂayfattəwun
        (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssat-om   Ɂay-fattəw-u-n
        (to-to-one-one-them/pro-pro-them   NEG-3m.SM-liked-pl-NEG
        'They hate each other.' Or 'They don't like each other.'

       D-f.pl men   (to-to-)one-one-them/pro-they   hair-them   PASS-combed RED.-3f.pl.OM
       'The boys combed each other's hair.'

d.   (nənɨ)ħɨdħɨdom/nɨssnɨssatom təmagʷitom/təxatiʕom
       (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom   tə-magʷit-om/tə-xatiʕ-om
       (to-to-)one-one-them/pro-they   PASS-argued-3f.pl.OM
       'They argued with each other.'

e.   ʔitom   ʔawədat   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   təragagiħom
       ʔɨt-om ʔawədat   (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom   tə-ragadiħ-om
       D-f.pl boys   (to-to-)one-one-them/pro-they   PASS-kicked-3f.pl.OM
       'The boys kicked each other.'

f.?? (nənɨ)ħɨdħɨʔom/nɨssnɨssatom   təs'əlaliʔom
       (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom   tə-s'aliʔ-om
       (to-to-one-one-them/pro-they PASS-hate.RED-3f.pl.OM
       'They hate each other.'

Note that in (A11d), the verb 'argue' only takes the non-reduplicated verb form. In other words, the REC-2-STRATEGY is not available with the verb 'argue' in Tigrinya. This is simply because the verb 'argue' lexically requires more than two participants.

2.3.3. Oblique arguments – sentence like (A12), which involve reciprocals embedded in prepositional phrases do involve the two reciprocal srategies in Tigrinya. Tigrinya has a preposition and the reciprocals empedded in prepositional phrases translate as signifying reciprocals.

A12a) ʔitom səbʔut ħidħidom   nɨbil   təfalit'əmo
       ʔɨt-om səbʔut ħɨd-ħɨd-om   nɨ-bil   tə-falit'əm-o
       D-f.pl men   one-one-them to-them   PASS-introduced-3f.pl.OM
       'The men introduced Bill to each other.'

  b) ʔitom təgwaʕazti   (nənɨ)ħɨdħɨdom/nɨssnɨssatom   təzəraribom
       ʔɨt-om təgʷaʕazti   (nənɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom   tə-z(ər)arib-om
       D-f.pl travels   (to-to-)one-one-them/pro-they   PASS-spoke(RED)-3m.pl.OM
       'The travelers spoke to each other.'

  c) ʔitom ʔax'ɨʃti bɨzaʕba   ħidħidom   tarix   səmiʕom
       ʔɨt-om ʔax'ɨʃti bɨ-zaʕba   ħɨd-ħɨd-om   tarix   səmiʕ-om
       D-f.pl priests by-thing   one-one-them story   heard-3f.pl.SM
       'The priests heard stories about each other.'

  d (nɨssatom)   ʔabx'ɨdmi   ħidħidom   wɨhbto   ʔanbirom/gədifom
       (nɨssatom)   ʔab-x'ɨdmi   ħɨd-ħɨd-om   wɨhbto   ʔanbir-om/gədif-om
       they   at-infront   one-one-them present   put/left-3m.pl.SM
       'They left presents in front of each other.'

2.3.4 Other persons and numbers, etc. Tigrinya uses the plural pronoun (nənɨ)ħɨdħɨdna/nɨssnɨssatna 'each other' to mark coreference strategy as the following examples illustrate:

  A13   REC-2 –STRATEGY

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a) (nɨħna) (nənɨ)ħɨdħɨdna/nɨssnɨssatna   tər(ə**ʔ**)aʔinna
(nɨħna) (nə-nɨ-)ħɨd-ħɨd-na/nɨss-nɨssatna   tə-r(ə**ʔ**)aʔi-na
(we)   (to-to-one-one-us/pro-we   PASS-saw.(RED)-1pl.SM
'We saw each other.'

b) (nɨskum) (nənɨ)ħɨdħɨdkum/nɨssnɨssatkum   tər(əd)adɨʔu/təħagagəzu
(nɨskum) (nə-nɨ-)ħɨd-ħɨd-na/nɨss-nɨssatkum   tə-rədadɨʔ-u/tə-ħagagəz-u
(we)   (to-to-one-one-us/pro-we   PASS-help.RED-2pl.SM
'You(pl.) must help each other.'

c) (nɨħna) ʕarsɨna   kɨnħas'ɨbinna
(nɨħna) ʕarsɨ-na   kɨ-n-ħas'ɨb-i-nna
(we)   self-us   FUT-1pl.SM-wash-be-1pl.SM
'We will wash ourselves.'

d) (nɨssatom) (nənɨ)ħɨdħɨdom/nɨssnɨssatom   kuliʃaʕ yɨn(əx')ax'əfu
(nɨssatom) (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom kuluʃaʕ yɨ-n(əx')ax'əf-u
(they) (to-to-one-one-us/pro-we   always 3pl.SM-criticize.(RED)-m
'They always criticize each other.'

e) bɨzuħat awədat (nənɨ)ħɨdħɨdom/nɨssnɨssatom   tər(**əg**)agiħom
bɨzuħat awədat (nə-nɨ-)ħɨd-ħɨd-om/nɨss-nɨssatom   tə-ragiħ-om
many   boys   (to-to-one-one-us/pro-they   3pl.SM-kick.(RED)-m
'Many boys kicked each other.'

The REC-2-STRATEGY (which uses -(nənɨ)ħɨdħɨdna/nɨssnɨssatna) involves multiple events of the same action (e.g., the event of kicking each other needs to happen more than ones in order to count the intereptation with this strategy viable).

2.3.5 No special strategy, different from the one illustrated in A13 is used with different clause types as the following model examples illustrate:

A14a) sol   ʔɨtən   ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən   yɨfatawwa   yi-bɨl
sol   ʔɨt-ən   ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən   yɨ-fatə-wwa   yi-bɨl
Sol   D-f.pl   girls   (to-to-)one-one-them/pro-they   3pl-love-f.pl   3m.pl.SM-say
'Sol says that the girls love each other.'

b) sol   ʔɨtən   ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən   kɨmogagəsa
sol   ʔɨt-ən   ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən   kɨ-mogagəs-a
Sol   D-f.pl   girls   (to-to-)one-one-them/pro-they   FUT-praise-3f.pl.SM
                  ħatitu
                  ħatit-u
                  asked-3m.sg.SM
'Sol asked/required that the girls praise each other.'

c) sol   ʔɨtən   ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən   kɨmogagəsa
sol   ʔɨt-ən   ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən   kɨ-mogagəs-a
Sol   D-f.pl   girls   (to-to-)one-one-them/pro-they   FUT-praise-3f.pl.SM
                  kəmzəllowən   ħasibu

kəm-zə-llow-ən ħasib-u
COM-Rel-say-COP-3f.pl.SM thought-3m.sg.SM
'Sol thought the girls should praise each other.'

d) sol ʔitən ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən kɨmogagəsa
sol ʔɨt-ən ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən kɨ-mogagəs-a
Sol D-f.pl girls (to-to-)one-one-them/pro-they FUT-praise-3f.pl.SM
ħatitu
ħatit-u
asked-3m.sg.SM
'Sol asked the girls to praise each other.'

e) ʔitən ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən kɨmogagəsa
ʔɨt-ən ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən kɨ-mogagəs-a
D-f.pl girls (to-to-)one-one-them/pro-they FUT-praise-3f.pl.SM
dəlyən
dəly-ən
want-3m.sg.SM
'The girls want to praise each other.'

f) sol ʔitən ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən kɨmogagəsa
sol ʔɨt-ən ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən kɨ-mogagəs-a
Sol D-f.pl girls (to-to-)one-one-them/pro-they FUT-praise-3f.pl.SM
yətəsfu
yɨ-s'ɨb-ə
3sg-expect-m.SM
'Sol expects the girls to praise each other.'

g) sol ʔitən ʔawald (nənɨ)ħɨdħɨdən/nɨssnɨssatən kɨmogagəsa
sol ʔɨt-ən ʔawald (nə-nɨ-)ħɨd-ħɨd-ən/nɨss-nɨssatən kɨ-mogagəs-a
Sol D-f.pl girls (to-to-)one-one-them/pro-they FUT-praise-3f.pl.SM
yətəsfu
səmiʕuwwən
səmiʕ-u-wwən
heard-3m.sg.SM-3f.pl.OM
'Sol heard the girls praising each other.'

2.4 Other types of local coreference

2.4.1 Possessives, alienable and inalienable – Tigrinya formally distinguishes alienable and inalienable possession. However, none of the above reflexive strategies are used, as the following translated examples illustarate. Just (in)alienable N+possessive suffix is employed to express possession in these model examples.

A15a) p'awlos saʔnu t'əfʔuwwo
p'awlos saʔn-u t'əfʔ-u-wwo
Paul shoe-his lost-3m.sg.SM-3m.sg.OM
'Paul lost his shoes.'

b) p'awlos   ʔidu   ʔalʕilu/ʔaws'iʔu
p'awlos   ʔid-u   ʔalʕil-u/ʔaws'iʔ-u
Paul   hand-his   raised-3m.sg.SM
'Paul raised his hand. (e.g., in class)'

c) p'awlos   ʔidu   ħaridu   /tə-ħaridu
p'awlos   ʔid-u   ħarid-u   /tə-ħarid-u
Paul   hand-his   cut-3m.sg.SM/PASS-cut-3m.sg.SM
'Paul cut his hand. (e.g., accidentally)'

d) p'awlos   ʔidu   mərmiru
p'awlos   ʔid-u   mərmir-u
Paul   hand-his   examine-3m.sg.SM
'Paul examined his hand.'

e) p'awlos   ʕankar-ʕankaritu   təʕas'ifu/təgəmyu
p'awlos   ʕankar-ʕankaritu   tə-ʕas'if-u/tə-gəmy-u
Paul   hand-his   PASS-twist-3m.sg.SM
'Paul twisted his ankle (or 'stubbed his toe')'

2.4.2 Reflexives and reciprocals in nominals – Tigrinya uses the element *nay* to express (alienable) possession and establish a reflexive relationship inside of a nominal phrase. Some languages use a different affix or form to establish a reflexive relationship inside of a nominal. Tigrinya often uses the prefix *ʕarsə-* **'self'** to establish a reflexive relationship inside a nominal phrase in the form of a compound as illustrated by A16.

A16)   nay andrew   ʕarsə-ʔɨmnət   nɨmeri   ʔanadiduwwa
nay andrew   ʕarsə-ʔɨmnət   nɨ-meri   ʔanadid-u-wwa
of-Andrew   self-faith   to-Mary   annoyed-3m.sg.SM-3f.sg.OM
'Andrew's self-confidence annoyed Mary.'

A17a) */??nay andrew ʕarsə-mɨffilat'   nɨti   məmhir   məsit'uww
nay andrew   ʕarsə-mɨffilat'   nɨ-t-i   məmhir   məsit'-u-wwo
of-Andrew   self-faith   to-D-m.sg   teacher   impress-3m.sg.SM-3m.sg.OM
'Andrew's introduction of himself impressed the teacher.'

b) nay andrew   ʕarsə-nəx'əfeta   nɨti   məmhir   məsit'uww
nay andrew   ʕarsə-mɨflat'   nɨ-t-i   məmhir   məsit'-u-wwo
of-Andrew   self-faith   to-D-m.sg   teacher   impress-3m.sg.SM-3m.sg.OM
'Andrew's evaluation of himself was too critical.'

c) nay (nənɨ)ħɨdħɨdna/nɨssnɨssatna nəx'əfeta/gəmgam   ʔazɨyu box'bowax' ʔɨyyu
nay (nənɨ)ħɨdħɨdna/nɨssnɨssatna nəx'əfeta/gəmgam   ʔazɨyu box'bowax' ʔɨyy-u
of-each other   evaluation   very   kind   be-3m.sg.SM
'Their evaluations of each other were too generous.'

Part 3   General details about the strategies

In section 2, we have seen several different strategies to encod reflexive or coreference relationship or meaning in Tigrinya. These are (n)-ʕars-/baʕl-strategy, Pass/Caus-(ʕars-/baʕal-)strategy, Pass-Strategy, and object-null-strategy. Tigrinya also uses two reciprocal strategies (Rec-1 & Rec-2) to express reciprocal meaning. The following sections will study the properties of each of these strategies.

3.1 Marking

Tigrinya uses the following marking strategies for conconstrual (both reflexive and reciprocal) interpretations:
1)   a.   marking on a construed argument using a special nominal NP or 'anaphor' (e.g., (n)-ʕars-u/baʕl-u 'himself')
     b.   Marking on the verb. (e.g., passive-reflexive marker *t-* or causative marker *ʔa-*)
     c.   Coconstrual is marked by dropping an argument. (as in Tigrinya Null-argument-strategy)
     d.   Coconstrual is signaled by a special reduplicated NP and a reduplicated verb sometimes accompanied by a causative or passive prefix.
The marking strategy given in (1a) is similar to the English reflexive strategy type (e.g., herself), which marks just one of the coreferent NPs, prototypically the object in subject-object coreference. Where (1b) is marked there is often a special form of the verb, accompanied by different affix or clitic forms that change the verb's argument structure. In this case, either reflexive or reciprocal interpretation can be achieved with a preverbal affix *t-* or *ʔa-* accompanied by a special nominal NP; this strategy is called the Passive-(ʕars-/baʕal-)strategy, as examples in (2) illustrate:

2) a.   joni   n-ʕarsu/n-baʕlu   nəti   məmhɨr   ʔafallitu
           joni   n-ʕars-u/n-baʕl-u   n-ət-i   məmhɨr   ʔa-fallitʼ-u
           John   self-him/self-him   Acc-D-m.sg   teacher   CAUS-know-3m.sg.SM
           'John introduced himself to the teacher.'
     b.   joni   nɨbaʕlu/nɨʕarsu   kullɨʃaʕ   yɨnəkɨf
           joni   nɨ-baʕl-u/nɨ-ʕars-u   kullɨʃaʕ   yɨ-nək'ɨf
           John   to-self-him   always   3m.sg.SM-criticize
           'John always criticizes himself.'
     c.   joni   (nɨbaʕlu/nɨʕarsu)   təxədinnu/təhasʼibu
           joni   (baʕl-u/ʕars-u) tə-xədinn-u/tə-hasʼib-u
           John   (self-him)   PASS-dress/wash-3m.sg.SM
           'John dressed/washed himself.'

The form (n)-ʕars-/baʕl- 'self' appears to occupy the position that an independent Accusative pronominal ((n)-ʕu/aʔ- 'me/him/her/you/us/them') normally would; however, while the accusative pronominal requires a double representation on the verb, the special full NPs in Tigrinya normally do not, as in (3).

3) nəʕuʔu   nəta   məmhɨr   ʔafallitʼəyyo
     nə-ʕuʔ-u   n-ət-a   məmhɨr   ʔa-fallitʼ-ə-yyo
     ACC-him   Acc-D-f.sg   teacher   CAUS-know-1sg.SM-3m.sg.OM
     'I introduced him to the teacher.'

Although the question of whether the affixes attach on the verb are cltics or agreement pronouns is open for a debate, clearly reflexivity in Tigrinya is marked by attaching a particular clitic/affix on the verb, often accompanied by special NP. In this case, one also add that in the presence of a direct and an indirect object, when the object marker appears on the verb, only the direct object becomes visible, never both.

3.2 Productivity

3.2.1 How productive is this strategy, with respect to which verbs or predicates allow it? Is the strategy in question *extremely productive*, *fairly productive*, or *not sure*?
The (n)-ʕars-/baʕl- 'self' and PASS/CAUS-(ʔars-/bəʔal- strategies are extremely productive; they can be used with almost all verbs that encode a reflexive or reciprocal meaning. The PASS/CAUS- strategy is also relatively productive; it is used with almost any type of verb except with 'ashamed, embarrass, criticize, etc.'types of verbs. What seems less productive, thoug, is the null-object-strategy for reflexives and reciprocals because it only applies to a small set of verbs, namely, grooming verbs in Tigrinya. This is a very skewed interpretation, however, one has to do a corpus-based frequency research in order to fully ascertain this prima facie tendency.

3.2.2 Is the use of this strategy lexically restricted to certain verb classes, or is it unrestricted (applies across all verb classes)?
The ((n)-ʕars-/baʕl-strategy has almost no exception; it seems not lexically restricted in its use. However, the other strategies are somehow restricted; for example, the verb marking strategy seems only possible with transitive verbs; it's not possible with intransitive verbs like 'die, fall, go, sleep, etc', among other things. While the Null-argument strategy is only possible with grooming verbs, the special reduplicated NP and reduplicated verb strategy has few exceptions; it is not possible with emotive verbs such as 'ashamed' and intransitive verbs such as 'run, sleep, etc'(but see the note in section 3.2.1).

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?
None of the strategies seem marked or unnatural or atypical in any social context. They all seem to enjoy equal social style, although often appear some contextual restriction that I could not be able to say at this point apart from the difference due to the type of verb or subjects involved.

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). For example, English has adverbial reflexives which look like object reflexives except they don't apply to arguments of the verb, e.g. *John did it himSELF*, where upper case indicates stress.
No special intonation or emphasis is observed in all the strategies in Tigrinya at this point. Generally, prosody and suprasegmental features are less obvious in Ethio-Semitic languages including Tigrinya. more research needs to be done in order to fully determine wether special intonation is at play or not.

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.

Some English speakers accept a pronominal object permitting <u>she</u>=<u>her</u>, but only with heavy stress on <u>her</u> as in B1a. If this sort of stress is required, we suspect that a simple pronoun is not normally a strategy for forming reflexive readings in English, and set the case aside. In contrastive environments, many English speakers also accept (B1b), where what is otherwise a reflexive is permitted to be non-locally related to its antecedent (the local antecedent should be <u>I</u>. Consider whether or not one of the strategies you have named may be described as only possible in such a specially stressed or marked environment.

Stress, like other suprasegmental features, is not commonly identifiable in Tigrinya and is not entirely clear whether it has any extra grammatical function at all. For emphasis and other discourse functions, namely, focus, Tigrinya uses separate lexical items such as *t'iraħ* 'only' and word order alternation. However, sometimes (n)-ʕars-/baʕl-strategy can be used to indicate emphasis or assertion (as in He **himself** took the car) as in the following example.

B   a).   nɨssu   ʕars-u/baʕl-u   nə-t-a   məkinawəsid-u-wwa
             He   self-him   Acc-D-f.sg   car   took-3m.sg.SM-3f.sg.OM
             'He himself (nobody else) took the car.'

3.4 Morphology

In this section we explore the internal structure or lexical properties of the form that supports a reflexive or reciprocal reading or any other form that is involved in the strategy (so, for example, if a given strategy involves both an affix on the verb and a special form of NP argument, answer for both parts).

3.4.1 Does the reflexive element, in its entirety, have a stateable lexical translation?
Yes, the reflexive elements have a stateable lexical meaning. Like in many languages, Tigrinya uses a reflexive consisting of a pronoun and a body part term e.g., ʕars- means 'head' (derived from the actual noun riʕsi 'head'), and a term baʕl- meaning 'owner.' Note, however, that these terms are bound forms; they don't appear independently.

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?
The term baʕl- can be used as a non-reflexive or reciprocal phrase, as in the following:
1   a).   baʕl-gəza
             own-house
             'a house owner'
     b).   baʕl-dʒoni
             so and so-John
             'John and others or John et al.'
The term ʕars- also spills into other domains and receive a different interpretation; for instance, it can combine with words like ʔimnət 'faith' receives a non-compositional meaning ʕarsə-ʔimnət 'confidence'.

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3.4.3 If the reflexive element has clear syntactic and part-of-speech sub-structure (e.g., head and modifiers, determiners, possessives) show it here. (This question can be very hard to answer for some parts or altogether. Provide as much information as you can, but if you do not see how to answer, say so and move on).

The reflexive is a combination of an independent noun plus possessive agreement affixes or clitics. Interms of the syntactic category of the reflexive items, they are diachronically nouns before they grammaticalize into pronouns. As prononouns, they can come as bound and independent forms.

(a) Agreement features etc.
All the affixes attached on the reflexive noun are possessive agreement affixes that can be attached to any possessed head noun as the following examples illustrate:

1 a). ʕars-əy/baʕl-əy   'myself'   b).   məsˈħaf-əy   'my book'
         self-my   book-my
        ʕars-ka/baʕl-ka   'yourself (m)'   məsˈħaf-ka   'your(m) book'
         self-your.m   book-your.m
        ʕars-ki/baʕl-ki 'yourself (f)'   məsˈħaf-ki   'your(f) book'
         self-your.f   book-your.f
        ʕars-u/baʕl-u   'himself'   məsˈħaf-u   'his book'
         self-him   book-him
        ʕars-a/baʕl-a   'herself'   məsˈħaf-a   'her book'
         self-her   book-her
        ʕars-nna/baʕl-nna   'ourselves'   məsˈħaf-nna   'our book'
         self-our   book-our
        ʕars-kən/baʕl-kən   'yourselves (f)'   məsˈħaf-kən   'your(f.pl) book'
         self-your.f.pl   book-your.f.pl
        ʕars-kum/baʕl-kum   'yourselves (m)'   məsˈħaf-kum 'your(m.pl) book'
         self-your.m.pl   book-your.m.pl
        ʕars-om/baʕl-om   'themselves (m)'   məsˈħaf-om   'their(m) book'
         self-them.m   book-them.m
        ʕars-ən/baʕl-ən   'themselves (f)'   məsˈħaf-ən   'their(f) book'
         self-them.f   book-them.f

Note that the special reciprocal NP 'one-another or one-one (reduplication of the pronoun 'one')' strategy also uses the same possessive suffixes but only the plural forms as the recipirocal demands plural interpretation.

(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.
Yes, both reflexive terms are related to a lexically contentiful word; while ʕars- is related to the body part 'head', baʕl- is related to the term 'own' (see also the full discritpion in previous sections).

3.5 The agreement paradigm

3.5.1 Give the morphological paradigm of each reflexive strategy. Be sure to vary all features that could cause the form of the reflexive to vary, even if some feature is only relevant in combination with a single combination of other feature values (e.g., include gender even if it is only relevant in nominative uses of the reflexive).

1. The reflexive strategies:
   a. the (n)-ʕars-/baʕl-STRATEGY

   This strategy is used without changing the form of the reflexive 'self' but altering the affixes attached to it; the possessive forms are inflected for person, gender and number and are homophonous with the Accusative forms in Tigrinya except for the first and third person singular forms.

(1).   ʕars-əy/baʕl-əy   'myself'   b).   nɨʕa-y   'me'
        self-my   1-my

        ʕars-ka/baʕl-ka   'yourself (m)'   nɨʕaʔ-ka   'you(m)'
        self-your.m   2-your.m

        ʕars-ki/baʕl-ki 'yourself (f)'   nɨʕaʔ-ki   'you(f)'
        self-your.f   2-your.f

        ʕars-u/baʕl-u   'himself'   nɨʕuʔ-u   'him'
        self-him   3-him

        ʕars-a/baʕl-a   'herself'   nɨʕaʔ-a 'her'
        self-her   3-her

        ʕars-nna/baʕl-nna   'ourselves'   nɨʕa-nna   'us'
        self-our   1-our

        ʕars-kən/baʕl-kən   'yourselves (f)'   nɨʕa-kən   'you(f.pl)'
        self-your.f.pl   2-your.f.pl

        ʕars-kum/baʕl-kum   'yourselves (m)'   nɨʕa-kum   'you(m.pl)'
        self-your.m.pl   2-your.m.pl

        ʕars-om/baʕl-om   'themselves (m)'   nɨʕuʔ-om   'them(m)'
        self-them.m   3-them.m

        ʕars-ən/baʕl-ən   'themselves (f)'   nɨʕəʔ-ən   'them(f)'
        self-them.f   3-them.f

     b. the REC-1/2-STRATEGY: special NP and verb reduplication marking strategy
This strategy only uses plural possessive suffixes that inflect for person, number and gender.
 (2).
          nɨssɨ-nɨssat-nna   'ourselves'   nə-nɨ-hɨd-hɨd-nna   'us one another'
          2/3-person-our   Acc-Acc-one-one-our

          nɨssɨ-nɨssat-kɨn   'yourselves (f)'   nə-nɨ-hɨd-hɨd-kən   'you(f.pl) one another'
          2/3-person -your.f.pl   Acc-Acc-one-one-your.f.pl

          nɨssɨ-nɨssat-kum   'yourselves (m)'   nə-nɨ-hɨd-hɨd-kum   'you(m.pl) one another'
          2/3-person -your.m.pl   Acc-Acc-one-one-your.m.pl

          nɨssɨ-nɨssat-om   'themselves (m)'   nə-nɨ-hɨd-hɨd-om   'them(m) one another'
          2/3-person -them.m   Acc-Acc-one-one-them.m

          nɨssɨ-nɨssat-ən   'themselves (f)'   nə-nɨ-hɨdhɨd-ən   'them(f) one another'
          2/3-person -them.f   Acc-Acc-one-one-them.f

Note that the other reflexive strategies take a combination of the above two and verb marking.

3.5.2 For each morphological feature, what determines its value? (For example, agreement with the antecedent, or agreement, in the case of possessives in some languages, with the possessed N.)

In all the above strategies the possessive suffixes must agree with the antecedent and those attached on the verb always agree in person, number and gender with the subject. The reflexive NP is also marked for accusative Case, according to its syntactic function and position. In addition, while the 'one-another or one-one-reduplication' strategy always takes a plural affix form, the *ʕars-/baʕl*-reflexive strategy takes both singular and plural forms. Finally, while the reflexive forms are often optional because they are recoverable from the verb pronominal attaching affixes, in certain cases they appear obligatory (see more on the coming sections).

3.6 Interaction with verb morphology - Incompatibilities

3.6.1 Tense, Mood, Aspect.
TMA categories in Tigrinya are expressed using different verb paradigms and verbal affixes; while most anaphors are not affected by the different TMA forms, some do. For instance, the reflexive reading is not available with the present tense/imperfective aspect forms of the verb, such as 'wash, know, think, wash' (see section 2.1.3 for discussion).

B3 a) *   peter   nɨbaʕlu/nɨʕarsu yɨfəlɨt'
              Peter   (nɨ-)baʕl-u   /(nɨ-)ʕarsu   yɨ-fəlit'
              Peter   (to-)self-his   /(to-)self   3m.sg.SM-knows
              'Peter knows himself.'

    b)*   peter   nɨbaʕlu/nɨʕarsu yɨħas'ib
              Peter   (nɨ-)baʕl-u   /(nɨ-)ʕarsu   yɨ-ħas'ib
              Peter   (to-)self-his   /(to-)self   3m.sg.SM-washes
              'Peter washes himself.'

3.6.2 Grammatical Function (GF)-changing - Consider GF-changing constructions or operations that affect the argument structure of a verb, adding, promoting, or demoting arguments.

In Tigrinya, grammatical function changing rules such as passives some times alter the interpretation of reflexives when they appear as by-phrases. Compare, the following:

 1 a)   ħagos   mantɨlə   k'əttil-u
             Hagos rabit   killed-3m.sg.SM
             'Hagos killed a rabit.'

    b)   ʔit-a   mantɨlə   bi-ħagos   tə-k'əttill-a
             the-f.sg   rabit   by-Hagos   PASS-killed-3f.sg.OM
             'The rabit is killed by Hagos.'

    c)   ʔit-a   mantɨlə   bi-baʕl-/ʕars-a   tə-x'əttill-a
             the-f.sg   rabit   by-self-her   PASS-killed-3f.sg.MO
             'The rabit is killed by herself/itself.' Or 'The rabit is killed herself.'

 2 a)   ħagos   nə-t-a   mantɨlə may   hib-u-wwa
             Hagos ACC-the-f.sg rabit   water gave-3m.sg.SM-3f.sg.OM
             'Hagos gave water to the rabit.'

    b)   ʔit-a   mantɨlə   bi-ħagos   may   tə-wahib-a
             the-f.sg   rabit   by-Hagos   water   PASS-gave-3f.sg.OM
             'The rabit is given water by Hagos.'

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c)*   Ɂit-a   mantilə   bi-baʕl-/ʕars-a may   tə-wahib-a
       the-f.sg   rabit   by-self-her   water   PASS-gave-3m.sg.MO
       'The rabit is given water by herself/itself.' Or 'The rabit is given water herself.'

There is some seattle differences between having a reflexive as a by-phase with the verb 'kill' and 'give' as the (un)grammaticality of (1c) and (2c) illustrate. See below sections for more restrictions.

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, providing an example an a brief statement of what the incompatible morphemes or constructions are. So for example, if your language distinguishes accusative case from dative case, is one or the other case exclusively compatible or incompatible with a particular strategy?
Unfortunately, Dative and Accusative cases are not morphologically distinguishable in Tigrinya; so, it seems harder to test the incompatibility here.

3.7   Uses that are not quite coreference

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

3.7.1 Idiosyncratic or inherent. Some languages have verbs that lexically require a reflexive which does not appear to correspond to an argument. The uses are typically special idioms. [Example: English has a few such verbs, for example, perjure oneself. For this verb, *John perjured Bill is not possible. German has many more, such as sich erinneren,"to remember", as does French, such as s'évanouir, "to faint"] Are there such uses for the current strategy? If so, give examples of as many as possible. It may turn out that not all reflexive idioms you find make use of the same strategy. Martin Evereart has noted that most idiosyncratic (sometimes called 'inherent') reflexives in Dutch are formed with zich, but a small set of others are formed with zichzelf. Please be on the look-out for such contrasts.

I couldn't think of any inherent or idiosyncratic reflexive in Tigrinya at this point. Nevertheless, as pointed out above, reflexive pronouns when they combine with some nouns such as 'faith, worry', they give rise a different non-compositional or idiomatic, if you will, meaning. Compare ʕarsə Ɂmnət/self faith 'confidence' and ʕarsə tʃ'ink'ət/self worry/ 'depression'.

3.7.2 Emphatic or intensifier. As in the English, The president himself answered the phone Tigrinya uses reflexives as emphatic expressions or intensifiers. This is particularly true with intransitive verbs as in the following:

1   a)   ħagos baʕl-u/ʕars-u   məs'iɁ-u
            Hagos self-him   came-3m.sg.SM
            'Hagos himself came.' Or 'Hagos came himself.'
    b)   ħagos baʕl-u/ʕars-u   gəyr-u-wwo

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Hagos self-him   did-3m.sg.SM-3m.sg.OM
'Hagos himself did it.' Or 'Hagos did it himself.'
c)   ħagos baʕl-u/ʕars-u kəyd-u   nəyr-u
Hagos self-him   went-3m.sg.SM   was-3m.sg.SM
'Hagos himself went.' Or 'Hagos went himself.'

Tigrinya may also have transitive verb 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 (2d, e).

2   d)   ħagos baʕl-u/ʕars-u ʕasa   bəliʕ-u
Hagos self-him   fish   ate-3m.sg.SM
'Hagos ate fish himself.' Or 'Hagos himself ate fish.'
e)   ħagos ʕasa   baʕl-u/ʕars-u bəliʕ-u
Hagos fish   self-him   ate-3m.sg.SM
'Hagos himself ate fish.' (only Hagos without being assisted by any other individual ate fish or Hagos did the fish eating, nobody else)

3.7.3 Middle. The argument structure of the verb is changed into a form that has an explicit patient, but no agent is present and an agent may or may not be implied. In English, this construction is not marked by any overt morphology, e.g., <u>The tires on this car change easily</u>. There does not appear to be any reflexive form used in English middles, but other languages use forms that are otherwise used to create reflexive readings. Greek uses passive morphology for middles, and as a reflexivization strategy.
Tigrinya uses a passive (tə-) and causative (ʔa-) verb forms with bound verbal forms to express middle. For instance the verb səbir- 'broke' if it is associated with the passive marker tə- it becomes (tə-səbir-) resulting ambiguous interpretation between a passive reading ('it was broken') and a middle reading ('something broke (on its own accord)'). Similarly, if the verb gossiʕ- 'burped' is associated with the causative marker (ʔa-), the verb becomes ambiguous (ʔa-gʷissiʕ-) between a causative reading ('he made someone burped') or a middle reading ('he burped (on his own accord/reflexive action)'). What is important to note is that these middle forms do not normally take reflexive forms (such as ʕars- or baʕl-); if they do, the interpretation will have a middle reading not a regular causative or passive, as in ʕarsu/baʕlu təsəbir-u/ʔa-gʷissiʕ-u 'he/it is broken/burped on its won accord.'
3.7.4 Distributive, sociative, etc. Some strategies (reciprocal markers most frequently) can also be used to mean that some action was performed separately, or jointly, or repeatedly, etc. You should only report uses that do not involve coconstrual between two logical arguments.
As indicated above, Tigrinya may take some distributive reciprocal forms, both on the verb and the pronoun, to express an action that happens jointly or repeatedly. For example, the pronoun nɨssɨnɨssat- (a reduplicated form of the base pronoun form nɨss-) can be used with a reciprocal form of the verb (usually made using a passive marker followed by a reduplicated form of the verb, as in tə-səbabir-om 'broke each other') to express an action that happens repeatedly or jointly with a reciprocal meaning. For example, nɨssɨnɨssat-om tə-səbabir-om 'they broke each other repeatedly'. This strategy is very productive as it applies to all plural pronoun forms in the language.
3.7.5 Deictic use - If the current strategy involves a nominal form (e.g., English <u>himself</u>) 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).
Yes, it is possible in Tigrinya but the interpretation somehow changes.

B5a)   bil   baʕl-u/ʕars-u   ʔay-rəʔay-ə-n
       Bil   self-him   Neg-saw-3m.sg.S-Neg
       'Bill did not see himself (somebody must have helped him)'

   b) meri   nɨ-baʕl-u/nɨ-ʕars-u   tɨ-fətw-o-do
       Mery   OM-self-him   3m.sg.S-like-3m.sg.O-Q
       'Does Mary like (nobody else but) himself?'

   c) baʕl-u/ʕars-u   tɨmali   nɨ-banki   kəyd-u
       self-him   yesterday   to-bank   went-3m.sg.S
       '(Nobody else but) himself went to the bank yesterday.

It is not entirely clear whether the same form can coreference to another participant in those contexts in Tigrinya. In (B5a), for instance, if the co-referncing pronominal changes from ə(=3msg.S) to o(=3msg.O), the interpretation changes to 'Bill didn't see himself (somebody must have helped him to see himself). The same is true in (B5b), but not in (B5c).

In Tigrinya, you can use simple pronominal objects but not reflexives coreferencing the speaker or hearer to encode the expressions given in (B6a). consider the following:

   B6a) bil   niʕay/niʕaxa   s'ərif-u-nni/ka
        Bill   me/you   insulted-3msg.S-1sg.O/2msg.O
        Bill insulted X. (X = speaker, X = addressee)

   b) bɨzuħatsəbat   anchovies   ay-fətɨ-wwu-n   annə/nissɨka   gɨn   yɨ/tɨ-fətw-om
       many people anchovies   Neg-like-3m.plS-Neg I/you   but   1sg/2msg-like-3mpl
       ʔɨyy-ə/xa
       be-1sg.S/2msg.S
       Many people do not like anchovies, but X likes them.
       (X = speaker, X = addressee)

However, none of those forms are employed in a sense like that of English generic <u>one</u> (which is not evenly acceptable for English speakers in non-subject environments as well). As far as I know, there is no independent pronoun with the meaning "arbitrary person" in Tigrinya, although impersonal pronouns are quite common in the language. Thus, the following examples are not translatable with a special arbitrary pronoun in Tigrinya.

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

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

   B15)   ʔɨt-om harəstot   nɨ-mən   riʔ-om
          D-m.Pl   farmers   OM-who   saw-3m.Pl.S
          'Who did the farmers see?'
          (Nɨssat-om)   nɨ-ʕɨʔu riʔ-om-o
          2/3-person-3m.pl   OM-him   saw-3m.Pl.S-3m.sg.O
          '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)   Ɂɨt-om harəstot   nɨ-meri   Ɂay-raɁy-u-wwa-n
       D-m.Pl   farmers   OM-Mery   Neg-saw-3m.Pl.S-3f.sg.O-Neg
       (nɨssat-om)   nɨ-ʕɨɁu   riɁ-om-o
       2/3-person-m.pl   OM-him   saw-3m.Pl.S-3m.sg.O
       '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.
No, I don't see any other different way at this point.

3.8 Proxy readings

One interpretation that the choice of coreferent strategy is sometimes sensitive to is proxy interpretation. A proxy reading is one where the coreferent argument is understood as a representation of or a "stand in" for the reference of the antecedent. This is often the case with statues, for example, or authors (e.g., <u>Grisham</u>) and their work. Feel free to substitute your favorite national author for <u>Grisham</u>.

The construction in (B8a) is ambiguous but the one in (B8b) is degraded (not fully acceptable) in Tigrinya.

B8a)   Ɂas's'e yəwhanɨs   Ɂab-t-i bɨherawi   məzəkɨr   ʕars-om   Ɂa-mogis-om
       King   John   at-m.sgnational   museum   self-them   CAUS-admired-
3m.Pl.S
       'King John admired himself in the national museum. (<u>himself</u> = statue of John)' or
       'King John admired himself in the national museum (himself = King John.'
   b) ??meles bɨ-amharina   Ɂintəzəy-koynu   bɨ-tigriñña   ʕars-u   Ɂay-tə-nəb-ə-n
       Meles   by-Amharic   COM-become/be   by-Tigrinya   self-him   Neg-Pass-read-
3m.sg.S-Neg
       'Meles has not read himself in Tigrinya, though he has read himself in
       Amharic. (<u>himself</u> = Meles'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)?? Ɂas's'e yəwhanis   Ɂab-t-i   biherawi   məzəkir   səfəf-mɨslom
       King   John   at-D-msg   national   museum   wax
           kə-y-gudaɁ-u   ʕars-om   bit'inɨk'ax'ə ħas'ib-om
           COM-Neg-damage-3m.Pl.O self-them   carefully   CAUS-admired-3m.Pl.S
       'King John washed himself carefully, so as not to damage the wax.'
   b) *Ɂas's'e yəwhanɨs   Ɂab-t-i   bɨherawi   məzəkɨr   səfəf-mɨslom
       King   John   at-D-msg   national   museum   wax-their
           kə-y-gudaɁ-u   bɨt'ɨnɨk'ax'ə ħas'ib-om
           COM-Neg-damage-3m.pl.O carefully   CAUS-admired-3m.Pl.S
       'King John washed carefully, so as not to damage the wax.'
   c) ?? Ɂɨt-a   tewasaɁit   səfəf-mɨsla   kə-y-gudɁ   ʕars-a bɨt'ɨnɨk'ax'ə ħas'ib-a
       D-f.sg moviestar   wax-her   COM-Neg-damage   herself carefully   CAUS-washed-
3f.sg.S

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

d) *ʔɨt-a tewasaʔit kə-y-gudʔ-ət bɨt'ɨnɨk'ax'ə ħas'ib-a
D-f.sg moviestar COM-Neg-damage-3f.sg.O carefully CAUS-washed-3f.sg.S
'The movie star dressed carefully, so as not to damage the wax.'

e) ʔas's'e yəwhanɨs ʔab-t-i mɨrʔit ʕars-om tə-məlkit-om
King John at-D-m.sg show self-them PASS-saw-3m.Pl.O
yɨxunɨmbər zɨ-tə-məlkət-u-wwo nəgər ʔay-fətəw-u-wwo-n
but REL-PASS-saw-3m.sg.S-3m.Pl-O thing Neg-liked-3m.sg.S-3m.Pl.O
'King John saw himself in the show, but he didn't like what he saw.'

The judgments for Tigrinya in these cases is that the null strategy in (B9b,d), possible normally for the verbs <u>dress</u> and <u>wash</u>, are not acceptable here, at least not in the intended sense resulting in ungrammaticality or grammatically degraded construction. However, (B9c) permits a reading that the movie star dressed her statue, in a way that does not damage the wax, it does not mean that she dressed another person, a reading possible for (B9b) in English but not in Tigrinya. (B9e) is possible under the reading where an actor is playing the part of King John's and King John is in the audience watching his counterpart on stage.

Since proxy reading does not seem to be generally acceptable, the following are ungrammatical in Tigrinya. that is Proxy readings do not require locality, but cases like B10a-c which seem to be generally possible in English are not in Tigrinya.

B10a) *meles nɨss-u amharɨna sɨbux' kəm-zɨ-xʔɨl yɨ-zarəb
Meles 2/3 person-m.sg Amharic good like-COM 3m.sg.S-say
'Meles says he sounds better in Amharic. (where <u>he</u> = Meles's writings)'

b) *ʔas's'e yəwhanɨs nɨss-u sɨbhx' kəm-zɨ-xon-ə ħasib-u
Meles 2/3 person-m.sg good like-COM-be-3m.sg.S thought-3m.sg.S
'King John thought that he looked handsome. (<u>he</u> = statue of King John)'

I'm not sure whether there is long distance proxy reading either in Tigrinya.

I find those examples hard to replicate in Tigrinya. For this reason, I take for now that proxy readings or 'assumed identities' for that matter is unavalinable in Tigrinya.

B11a) Mark Twain and Victor Hugo did not read each other in Berber.
b) Marlene and Castro did not see each other in the audience, but they did see each other on the stage/in the show.

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) meles kab-bil nɨ ʕax'əb nɨ-baʕl-/ʕars-u yɨ-fətu/məgʷus
Meles from-Bill more OM-self-him 3m.sg.S-like/admire
i. 'Meles likes/praises himself more than *Meles likes* Bill.'
b) meles kab-bil zɨ-fətu-o/məgus-o nɨ ʕax'əb
Meles from-Bill COM-3m.sg.S-like/admire-3m.sg.O more

        nɨ-baʕl-/ʕars-u   yɨ-fətu/məgus
        OM-self-him   3m.sg.S-like/admire

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

c)   meles   nɨ-baʕl-/ʕars-u   yɨ-fətu/məgus   kab-bil   nɨ-baʕl-/ʕars-u
    Meles   OM-self-him   3m.sg.S-like/admire from-Bill OM-self-him
             zɨ-fətu-o/məgus-o   nɨʕax'əb
             COM-3m.sg.S-like/admire-3m.sg.O more

    iii.   'Meles likes/praises himself more than Bill *likes himself*'

Tigrinya seems to allow the first and second strategies (i)-(ii). Although it does not seem to allow anaphor ellipsis. This is especially true for (iii), where another anaphor is required in order to get that interpretation. For (ii), however, since the verb is co-indexed with the pronominal affix (= -o '3m.sg.O'), the elided anaphor can be recovered from it.

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

PART 4   Exploration of syntactic domains

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

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

To show how we would like you to proceed in this section, we begin with a relatively simple elicitation. Construct a relatively simple transitive sentence, such as John hit Bill, providing gloss and translation. Now

use each coreference strategy in your list to change the sentence you constructed into a reflexive. For example, for a sentence like John hit X where X is John, try each strategy and determine whether or not the outcome is successful for a reflexive or reciprocal reading. For English, we might describe four strategies as IMPLICIT, X-SELF, EACH-O and O-another (one another) as well as the pronominal strategy which, in English, does not normally work for coargument coreference. As a native English speaker, I might respond as follows.

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

Remarks: *Example (X1c) is not possible with any interpretation, reciprocal or reflexive. The IMPLICIT strategy is limited to certain verb classes, as mentioned in section 2.1.3.*

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

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

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

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

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

Remarks: *I had to change the verb to wash to test the implicit strategy, since that strategy is generally impossible with see, but it doesn't help and plurality wouldn't make a difference. We don't have a possessive x-self form, but a pronoun works for coreference here with a singular or plural antecedent. For some reason, the reciprocals sound odd in this construction, but they improve a lot if we replace mother with mothers.*

Then I would accept (X3c) completely, but maybe (X3d) is still ?. Incidentally, the plural pronoun in (X3e) does not appear to have a reciprocal reading, but maybe it is just vague.

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

4.1 Clausemate coconstrual

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

4.1.1 Verb class restrictions

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

C1a)　bob　*(nɨ-ʕars-u/baʕl-u)　riʔ-u
　　　Bob　OM-self-him　　　　saw-3m.sg.S
　　　'Bob saw X (himself).'

　b)　ʔɨt-a　səbəyti　　　*(nɨ-ʕars-a/baʕl-a)　gəlis'-a
　　　D-f.sg　woman　　　OM-self-her　　　　described-3f.sg.S
　　　'The women described X (herself).'

　c) ??nɨssɨxat-kum　　　　nɨ-ʕars-kum/baʕl-kum jelliʕ-kum
　　　2/3 person-2m.pl　　OM-self-your　　　　　kicked-2m.pl.S
　　　'You(pl.) kicked X (yourselves).'

　d)　nɨssɨxat-om　　　　(nɨ-ʕarsat-om/baʕlat-om)　　ʕamogis-om
　　　2/3 person-2m.pl　　OM-self-your　　　　　　praised-3m.pl.S
　　　'They praised X (themselves).'

Remarks: The verbs 'see, describe' and 'kick' are not possible with reflexive or reciprocal interpretations unless they accompany the reflexive or reciprocal pronoun. The verb 'praise', however, seems to have either a reflexive or reciprocal reading even if we dropped off the reflexive or reciprocal pronoun. Note that example (C1c) is less grammatical with the verb 'kick'. It gets better with reciprocal reading when we use (nən)hɨdhɨd-kum/nɨssnɨssat-kum 'each other or one another'.

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)　(i)　dona　(nɨ-ʕars-a/baʕl-a)　　tə-ħas'ib-a
　　　　　Donna OM-self-her　　　PASS-washed-3f.sg.S
　　　　　'Donna washed X. (X = Donna).'

　　　(ii)　dona　(nɨ-ʕars-a/baʕl-a)　　ħas'ib-a
　　　　　Donna OM-self-her　　　washed-3f.sg.S
　　　　　'Donna washed X. (X = Donna).'

　b)　(i)　don　(tʃ'ogri-u)　　tə-xoris'-u
　　　　　Don　hair-his　　　PASS-cut-3f.sg.S
　　　　　'Don cut X's hair. (X = Don).' or 'Don cut his hair.'

　　　(ii)　don　(nay-ʕars-u/baʕl-u　tʃ'ogri) xoris'-u

		Don	of-self-him		hair	cut-3f.sg.S

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

c) (i) Ɂɨt-a gʷal [key fəllət'-ət] (nɨ-ʕars-a/baʕl-a) tə-harid-a
        D-f.sg girl Not know-3f.sg.S OM-self-her PASS-cut-3f.sg.S
        'The girl cut X [unintentionally] (X = the girl).'

   (ii) Ɂɨt-a gʷal [key fəllət'-ət] (nɨ-ʕars-a/baʕl-a) harid-a
        D-f.sg girl Not know-3f.sg.S OM-self-her PASS-cut-3f.sg.S
        'The girl cut X [unintentionally] (X = the girl).'

Remarks: The examples in (C3) seem to be possible in both the passive strategy and non-passive strategy to express reflexive meaning even if we dropped the reflexive pronoun. The meaning, in each of the strategies, however seems to vary; for example, (C3ai) without the reflexive pronoun can get a regular passive reading, while that's not possible with (C3aii). Similary, *(C3aii) is ambiguous between two meanings: Don cut his own hair by himself and Don cut his hair in a barber.*

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

C4a) joni nɨ-ʕars-u/baʕl-u yɨ-fərɨħ/ yɨ-s'əlɨɁ
     John OM-self-her 3f.sg.S-hate/fear
     'John hates/fears X (himself).'

b) *joni nɨ-ʕars-u/baʕl-u ħafir-u
     John OM-self-her ashamed-3f.sg.S
     'John is ashamed of X (himself).'

c) ? joni nɨ-ʕars-u/baʕl-u tə-tʃ'ənnix'-u
     John OM-self-her PASS-worried-3f.sg.S
     'John is worried about X (himself).'

d) * joni nɨ-ʕars-u/baʕl-u tə-ħabin-u
     John OM-self-her PASS-proud-3f.sg.S
     'John is proud of X (himself).'

e) joni nɨ-ʕars-u/baʕl-u yə-tʃ'ənnɨx'/ʃəgɨr/ħəgus
     John OM-self-her 3f.sg.S-PASS-worry/trouble/please
     'John worries/troubles/pleases X (himself).'

Remarks: (C4a) seems impossible with the verb 'hate' if we drop the reflexive pronoun; although that is completely OK with 'fear.'

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

C5a) Ɂɨt-a səbəyti *(nɨ-ʕars-a/baʕl-a) kɨ-tə-bɨrs Ɂɨyy-a
     D-f.sg woman OM-self-her FUT-PASS-3f.sg.S be-3f.sg.S
     'The women will destroy X (herself).'

b) * Ɂɨt-ən məxayɨn *(nɨ-ʕarsat-ən/baʕlat-ən) hanis'-ən
     D-f.pl machines OM-self-them.f built-3f.pl.S
     'The machines built X (X = themselves).'

c) Ɂɨt-a səbəyti *(nɨ-ʕars-a/baʕl-a) k'ətill-a
     D-f.sg woman OM-self-her killed-3f.sg.S

'The woman killed X (herself).'

    d)   Ɂɨt-a   səbəyti   *(nɨ-ʕars-a/baʕl-a)   Ɂat'fiɁ-a
           D-f.sg woman   OM-self-her   disappeared-3f.sg.S
           'The woman made X disappear (herself).'

Remarks: all the verbs in (C5) are not possible without a reflexive pronoun (C5b) is ungrammatical; beside, (C5b) is ungrammatical wit both reflexive and reciprocal reading even with a reflexive or reciprocal pronoun although am not sure whether it is so due to the subject is inanimate or the verb 'construct' doesn't take a reflexive.

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

    C6a)   Ɂɨt-om   Ɂawodat   *(nɨ-ʕarsat-om/baʕlat-om)   tə-wəkill-om
           D-m.pl   boys   OM-self-them.m   PASS-represented-3m.pl.S
           'The boys represented X.'
    b)   joni   *(nɨ-ʕars-u/baʕl-u)   tə-zarib-u
           John   OM-self-him   PASS-spoke-3m.sg.S
           'John spoke for X.'

Remarks: (C6a) doesn't have a reflexive or reciprocal reading unless it's associated with a reflexive or reciprocal pronoun. The same is true with (C6b), reflexive reading is attained unless reflexive pronouns is involved.

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

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

4.1.2 Argument position pairings

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

    C7a) ? meri   Ɂɨt-i   hɨyab nɨ-ʕars-a/baʕl-a   hib-a
           Mary D-m.sg   gift   OM-self-her   gave-3f.sg.S   be-3f.sg.S
           'Mary gave the gift to X (X = Mary)'
    b) ? joni   Ɂɨt-i   gəza nɨ-ʕars-u/baʕl-u   ɁarɁiy-u
           Mary D-m.sg   gift   OM-self-her   showed-3m.sg.S
           'John showed the house to X (X = John).'

For comparison, also provide judgements for the following:

C8a) meri nɨ-ʕars-a/baʕl-a   ʔɨt-i   hɨyab   hib-a
      Mary OM-self-her   D-m.sg   gift   gave-3f.sg.S be-3f.sg.S
      'Mary gave X the gift (X = Mary)'
   b) joni nɨ-ʕars-u/baʕl-u   ʔɨt-i   gəza   ʔarʔiy-u
      John OM-self-him   D-m.sg   gift   showed-3m.sg.S
      'John showed X to the children (X = John)'

4.1.2.2 Oblique arguments - Give some examples with oblique arguments, in whatever forms your language allows. Choose verbs that take oblique arguments in your language and if your language has morphological case, look for arguments that are not in the normal case for objects (e.g., not in the Accusative). For example, in German, the verb <u>helfen</u> meaning "to help" takes an object that is casemarked Dative even though the objects of <u>hit</u> and <u>see</u> would be casemarked Accusative. If your language does not have overt Case, then focus on the indirect objects of ditransitive verbs (e.g., in English, <u>Alice</u> in <u>Dan gave Alice a book</u> is the indirect object of a transitive verb) and prepositional objects, but be sure to consider these sorts of argument types whether your language has casemarking or not.

C9a) dan   nɨ-ʕars-u/baʕl-u   tə-zarib-u-wwo
      Dan   OM-self-him   PASS-spoke-3m.sg.S-3m.sg.O
      'Dan talked to X.'
   b) dan   nɨ-meri   bɨ-zaʕba   ʕars-u/baʕl-u tə-zarib-u-wwa
      Dan   to-Mary   by-matter   self-him   PASS-spoke-3m.sg.S-3f.sg.O
      'Dan told Mary about X (X = Dan)'
   c) dan   nɨ-ʕars-u/baʕl-u   məs'haf   hib-u
      Dan   OM-self-him   book   gave-3m.sg.S
      'Dan gave X a book.'

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

C10a) meri   təmən ʔab-dɨriʔ-a   riʔ-a
      Mary   snake at-behind-her saw-3f.sg.S
      'Mary saw a snake behind X (X = Mary)'
   b) meri nɨ-ʕay   bɨ-mixnɨyat   zɨ-s'əhaf-ətt-o   ʕankəs' s'əwiʔ-at-nni
      Mary OM-me   by-reason   COM-wrote-3f.sg.S-3m.sg.O article called-3f.sg.S-1sg.O
      'Mary called me because of an article about X (X = Mary)'
   c) ? joni nɨ-meri   bɨ-ʕars-u/baʕl-u   mixnɨyat   ʔanadid-u-wwa
      John to-Mary   by-self-him   reason   offended-3m.sg.S-3f.sg.O
      'John offended Mary because of X (X = John)'
   d)??nɨ-hna nɨ-ʕars-nna/baʕl-nna bɨ-z-əy-əgədis   sɨhix'-nna
      OM-us OM-self-our   by-COM-NEG-matter laughed-1pl.O
      'We laughed in spite of X'

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 Mary." (where X = Mary for C11a-d). For example, for (C11c), <u>Bill gave Hal himself</u>, which is admittedly pragmatically awkward, but imagine for (C11a) that john is showing Mary his image in the mirror - imagine Hal had never seen a mirror before.

C11a)   joni   nɨ-meri   nɨ-ʕars-a/baʕl-a   ʔarʔiy-u-wwa
           Jon   to-Mary   OM-self-her   showed-3m.sg.S-3f.sg.O
           'John showed Mary to X.'

    b)   joni   nɨ-ʕars-a/baʕl-a   nɨ-meri   ʔarʔiy-u-wwa
           Jon   OM-self-her   to-Mary   showed-3m.sg.S-3f.sg.O
           'John showed X to Mary.'

    c)   joni   nɨ-meri   nɨ-ʕars-a/baʕl-a   hib-u-wwa
           Jon   to-Mary   OM-self-her   gave-3m.sg.S-3f.sg.O
           'John gave Mary X.'

    d)   joni   nɨ-ʕars-a/baʕl-a   nɨ-meri   hib-u-wwa
           Jon   OM-self-her   to-Mary   gave-3m.sg.S-3f.sg.O
           'John gave X Mary.'

    e)   meri   nɨ-t-om   ʔawedat   bɨ-zaʕba   ʕarsat-om/baʕlat-om/nɨssɨ-nɨssat-om/hɨd-hɨd-om
           Mary   OM-D-m.pl   boys   by-matter self/self/each other/one-one-them.m
                   hatit-/negir-at-om
                   asked/told-3f.sg.S-3m.pl.O
           'Mary told/asked the boys about themsleves/each other.'

    f)   meri   nɨ-t-om   ʔawedat   nɨ-ni-ʕarsat-/baʕlat-/-nɨssɨ-nɨssat-om/-hɨd-hɨd-om
           Mary   OM-D-m.pl   boys   Acc-Acc-self/self/each other/one-one-them.m
                   ʔarʔiy-/ʔafalit'a-/negir-at-om
                   asked/told-3f.sg.S-3m.pl.O
           'Mary showed/introduced/presented the boys to each other.'

4.1.2.5 Two internal arguments or adjuncts - Consider coreference between two arguments of adjunct NPs in the same clause, neither of which is a subject and neither of which is a direct object (if your language has such constructions - if not just say so and move on). Consider X=Hal in (C12). If I were answering for English, I would say that (C12c) is successful with the pronoun-SELF strategy, (C12b,d) fail with both pronoun-SELF and the independent pronoun strategies, and C12a is marginal with the independent pronoun strategy.

Coreference between two non-argument adjuncts renders ungrammatical in Tigrinya.

    C12a) Bill talked about Hal to X.
       b) Mary talked about X to Hal.
       c) Mary talked to Hal about X
       d) Mary talked to X about Hal.

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

The following examples also produce ungrammatical constructions in Tigrinya.

    C13a) Nick telephoned X's mother.
       b) Nick combed X's hair.

c) Nick spoke to X's boss.
d) Nick put X's book on the table.
e) The king gave Nick a prize in X's village.
f) 'The boys washed X's face.'
C14a) Nick's father admires X.
b) Nick's ambition destroyed X.
c) Nick's mother sold X's car.

Please provide translations and judgments for the following examples where the plural pronoun is coconstrued with <u>the boys</u> or <u>the poltiticians</u>.

X20a) ʔɨt-om   ʔawodat   nɨ-nay-ʕarsat-/baʕlat-/hɨd-hɨd-om   sili   riʔ-om
D-m.pl   boys   OM-of-self/self/one-one-them.m   picture saw-3m.pl.S
'The boys saw pictures of themselves/each other/them.'

b) meri   nɨ-t-om   ʔawedat   bɨ-zaʕba nay-ʕarsat-/baʕlat-/nɨssɨ-nɨssat-/hɨd-hɨd-om
Mary OM-D-m.pl   boys   by-matter of-self/self/each other/one-one-them
       sili   negir-at-om
       picture told-3f.sg.S-3m.pl.O
'Mary told the boys about pictures of themselves/each other/them'

c) ʔɨt-om   polətikəNatat nə-nɨ-ʕarsat-/baʕlat-/hɨd-hɨd-om   k-t'əx'ax'-u   təlim-om
D-m.pl   politicians   Acc-OM-self/self/one-one-them.m   attach-m.pl   planed-3m.pl.S
'The politicians planned attacks against each other.'

d) * ʔɨt-om   polətikəNatat nə-nɨ-ʕarsat-/baʕlat-/hɨd-hɨd-om   k-t'əx'ax'-u   ?amsi-om
D-m.pl   politicians   Acc-OM-self/self/one-one-them.m   attach-m.pl   faked-3m.pl.S
'The politicians faked/simulated attacks against themselves/them.'

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 <u>by</u>-phrases in (C15a,b) are not interpretable as "alone" (see 3.6) and are not generally regarded as acceptable with <u>by herself</u>.

C15a) poli   bɨ-ʕars-/baʕl-a   tə-mogis-a
      Polly   by-self-her   PASS-praised-3f.sg.S
      'Polly was praised by X.'

b) poli   bɨ-ʕars-/baʕl-a   tə-hagiz-a
   Polly   by-self-her   PASS-helped-3f.sg.S
   'Polly was helped by X.'

c) * nɨʕʃtay   bɨ-poli   bɨ-zaʕba   ʕars-/baʕl-a   yɨ-fɨlət'
   small   by-Polly   by-matter   self-her   3f.sg.S-PASS-know
   'Little is known by Polly about X (X = Polly).'

d) *ʔɨt-i   sɨmʔi bɨ-ʕars-/baʕl-u tə-məxix-u
   D-m.sg   wax   by-self-him   PASS-melted-3m.sg.S

'The wax melted itself.'

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 <u>Max melted himself</u>.

4.1.3 Properties of antecedents

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

C16a) ʔanə   ʕars-/ nɨ-baʕl-əy   riʔ-ə
      I   OM-self-my   saw-1sg.S
      'I saw X.'

   b) nɨss-ka ʕars-/nɨ-baʕl-ka   riʔ-ka
      you.m self-your.m   saw-1sg.S
      'You saw X.'

   c) nɨss-ki ʕars-/nɨ-baʕl-ki   riʔ-ki
      you.m self-your.m   saw-1sg.S
      'You saw X.'   (etc.)

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

C17a) ʔanə   ʕars-/ nɨ-baʕl-əy   tə-has'ib-ə
      I   self-/OM-self-my   PASS-washed-1sg.S
      'I washed X.'

   b) ʔanə   ʕars-/ nɨ-baʕl-əy   yɨ-s'ələʔ
      I   self-/OM-self-my   1sg.S-hate
      'I hate X.'

   c) ʔanə   nɨ-dʒoni   bɨ-zaʕba-y   nəgir-əy-o
      I   OM-self-my   by-matter-my told-1sg.S-3m.sgO
      'I told John about X.'

   d) ʔanə   təmən   ab-t'ɨxay   riʔ-ə
      I   snake   at-near   saw-1sg.S
      'I saw a snake near X.'

   e) ʔanə   nɨ-ʕars-/nɨ-baʕl-əy   tə-fətawi   ʔəyy-ə
      I   OM-self-my   PASS-liked   be-1sg.S
      'I am liked by X.'

f) ?ʔanə   nɨ-ʕars-/nɨ-baʕl-əy   wəladit   dəwill-ə
   I   OM-self-my   mother   phoned-1sg.S
   'I telephoned X's mother'

g) ʔabo-y   nɨ-ʕars-/nɨ-baʕl-u   yə-dɨnɨx
   father-my   OM-self-my   3m.sg.S-PASS-admire
   '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.

All objects in Tigrinya are addressed with some form of gender (feminine or masculine). So, as long as the reflexive and its antecedent have the same agreement features the construction remains grammatical.

C18a)   tarix   nɨ-ʕars-/nɨ-baʕl-a   tɨ-dəgɨm
        history OM-self-my   3f.sg.S-repeat
        'History repeats X'

   b)   ʔɨzz-i   ʕaynet ʕassa   nɨ-ʕars-/nɨ-baʕl-u   yɨ-bəlɨʔ
        this-m.sg   type   fish   OM-self-him   3m.sg.S-eat
        'This type of fish cannibalizes X.'

   c)   ʔɨt-a   mekina   nɨ-ʕars-/nɨ-baʕl-a   tə-t'ɨfɨʔ
        D-f.sg machine   OM-self-her   3m.sg.S-PASS-destroy
        'This machine destroys X (e.g., after you use it)'

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

Tigrinya has both an independent and dependent pronouns; however, the choice of each pronoun type doesn't seem to play a role in the choice of strategy. This is because the dependent pronouns are always realized as affixes on the verb and the independent pronouns are droppable.

4.1.3.4 Quantifiers - Provide judgments 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)   nəfsi-wəkəf   səbəyti   nɨ-ʕars-/baʕl-a riʔ-a
        Every   woman   OM-self-her   saw-3f.sg.S
        'Every woman saw X.'

   b)   nəfsi-wəkəf   kolʕa   nɨ-ʕars-/baʕl-u has'ib-u
        Every   woman   OM-self-him   washed-3m.sg.S
        Every child washed X.

   c)   nəfsi-wəkəf   təməharay   nɨ-ʕars-/baʕl-u yɨ-s'əlɨʔ
        Every   woman   OM-self-him   3f.sg.S-hate
        Every student hates X.

   d)??nəfsi-wəkəf   k'olʕa   təmən ʔab-t'ɨxiʔ   ʕars-/baʕl-u   riʔ-u
        Every   child   snake at-near   self-him him   saw-3f.sg.S
        Every child saw a snake near X.

   e)??nəfsi-wəkəf   kolʕa   nɨ-ʕars-/baʕl-u wəladit   dəwill-u

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Every	child	OM-self-him	mother	phoned-3m.sg.S

Every child telephoned X's mother.

f) ʔabo nəfsi-wəkəf kolʕa nɨ-nay-ʕars-/nɨ-baʕl-u yə-dɨnɨx
father every child OM-of-self-him 3m.sg.S-PASS-admire
Every child's father admires X.

Repeat, replacing the quantifier "Every N" with "No N", and if any quantified antecedents behave differently from these, please provide the same paradigm.
Note that Tigrinya uses a double negative construction with those kinds of negative quantifiers.

C19a) walla-hanti səbəyti nɨ-ʕars-/baʕl-a ʔay-rəʔay-ət-n
Noone-f woman OM-self-her Neg-saw-3f.sg.S-Neg
'No woman saw X.'

b) walla-ħadə kolʕa nɨ-ʕars-/baʕl-u ʔay-ħas'əb-ən
noone.m child OM-self-him Neg-washed-3m.sg.S-Neg
No child washed X.

c) walla-ħadə təməharay nɨ-ʕars-/baʕl-u ʔay-yɨ-s'əlɨʔ-n
noone.m woman OM-self-him Neg-3f.sg.S-hate-Neg
No student hates X.

d)?? walla-ħadə k'olʕa təmən ʔab-t'ɨxiʔa ʕars-/baʕl-u ʔay-rəʔay-ət-in
noone.m child snake at-near self-him him Neg-saw-3f.sg.S-Neg
No child saw a snake near X.

e)?? walla-ħadə kolʕa nɨ-ʕars-/baʕl-u wəladit ʔay-dəwəll-ə-n
none.m child OM-self-him mother Neg-phoned-3m.sg.S-Neg
No child telephoned X's mother.

f) ʔabo walla-ħadə kolʕa nɨ-nay-ʕars-/nɨ-baʕl-u ʔay-yə-dɨnɨx-in
father noone.m child OM-of-self-him Neg-3m.sg.S-PASS-admire-Neg
No child's father admires X.

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.
Tigrinya uses wh- in situ strategy and the coreference of wh-elements must be specified for gender on the verb; the following examples are illustrated by using just the 3m.sg pronoun.

C20a) mən nɨ-ʕars-/baʕl-u riʔ-
who OM-self-him saw--3f.sg.S
Who saw X?

b) mən nɨ-ʕars-/baʕl-u has'ib-u
who OM-self-him washed--3f.sg.S
Who washed X?

c) mən təmən ʔab-t'ɨxiʔ ʕars-/baʕl-u riʔ-
who snake at-near OM-self-him saw--3f.sg.S
Who saw a snake near X?

d) mən nɨ-ʕars-/baʕl-u wəladit dəwill -u
who OM-self-him mother phoned--3f.sg.S

Who telephoned X's mother?

e) ʔabo   mən   nɨ-nay-ʕars-/nɨ-baʕl-u yə-dɨnɨx
   father who   OM-of-self-him   3m.sg.S-PASS-admire
   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.
All of the following examples are ungrammatical in Tigrinya as well.

   C21a) X saw Fred.
     b) X saw us. (X=us)
     c) X saw a snake behind Fred.
     d) X impressed Fred
     e) Bill spoke to X about Fred.
     f) Bill told X about Fred
     g) X was praised by Fred.
     h) 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.
None of these are also grammatical in Tigrinya. However, in some cases where there is information structuring, the antecedent may follow the pronoun for other extagrammatical reasons.

   C22a) X telephoned George's mother.
     b) X's mother wanted to improve George.
     c) X's mother worried/impressed George.
     d) Mary told X's mother about George.
     e) A picture of X's mother fell on George.
     f) A picture of X's mother pleased George.

In some languages, it is possible to scramble the positions of argument nominals so that objects can precede subjects, or perhaps the order of arguments in the VP is less fixed. In translating these cases we want you to preserve the linear order of X before its antecedent and providing a judgment accordingly, insofar as the unmarked word order of your language allows.
Please let us know, however, if word order in your language is fluid enough to scramble arguments in such a way that the linear order between X and its antecedent could change (e.g., in English, this would be a form of topicalization, such as John, his mother loves, which English informants do not always agree about). This we will not explore directly in this questionnaire, but we want to know in case we choose to do follow up research on this phenomenon.

4.1.4 Some matters of interpretation

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

C23)   (i)   ʔɨt-ən ʔanɨsti   nɨ-ʕarsat-/nɨ-baʕlat-ən yɨ-hɨgɨz-a
                 D-f,sg women   OM-self-her   3-help-f.sg.S
                 The women help X.

       (ii)   ʔɨt-ən ʔanɨsti   nɨss-nɨssat-ən/nə-nɨ-hɨd-hɨd-ən   yɨ-tə-hagagəz-a
                 D-f,sg women   2/3person-f.pl/Acc-OM-one-one-f.pl 3f.sg.S-help.Redup-f
                 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.

In Tigrinya, (C23) refers to the meaning given in (C24d) and (e).

Remarks*: if X replaces_themselves then (C24d,e) are clearly possible, while (CD24b,c) are possible, but maybe not the first interpretations I would think of. However, the data in (CD2ba,e) are not possible. On the other hand, if X refers to each other, constructions of the (C24a,e)type are clearly possible and probably (C24f), but not (C24b,d) and (C24c) as well.*

    C24a) Each woman helps all (or almost all) of the women, excluding herself.
        b) Each woman helps all of the women, including herself.
        c) Each woman helps at least some of the other women.
        d) Each woman helps herself.
        e) The women together as a group help the women together as a group.
        f) Each woman helps one of the women other than herself, such that all of the
           women are helped by one of the others.

Remarks*: If I were answering this for English, I would say for_themselves in place of X that (C24d,e) are clearly possible, while (CD24b,c) are possible, but maybe not the first interpretations I would think of. However, (CD2ba,e) are not possible. On the other hand, if I were answering for each other, (C24a,e) are clearly possible and probably (C24f), but not (C24b,d), and I am not sure about (C24c).*

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

    C25a) ʔɨt-ən ʔanɨsti   nɨ-ʕarsat-/nɨ-baʕlat-ən ʔamogis- ən
           D-f.pl women   OM-self-them.f   praised-3f.pl.S
           The women praised X.
       b) ʔɨt-ən ʔanɨsti   nɨ-ʕarsat-/nɨ-baʕlat-ən k-hɨgɨz-a   ʔɨyy-ən
           D-f.pl women   OM-self-them.f   Fut-3f.sg.S-help-f   be-3f.pl.S
           The women will support X.
       c) ʔɨt-ən ʔanɨsti   nɨ-ʕarsat-/nɨ-baʕlat-ən siʔill- ən
           D-f.pl women   OM-self-them.f   photographed-3f.sg.S
           The women photographed X.
       d) ʔɨt-ən ʔanɨsti   nɨ-ʕarsat-/nɨ-baʕlat-ən kihid- ən
           D-f.pl women   OM-self-them.f   betrayed-3f.sg.S
           The women betrayed X.

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?
All the above examples permit reflexive readings; reciprocal readings are only obtained if reciprocal pronouns and verb forms are used as we've seen in (C23) above.

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, <u>Die Kinderen wassen sich</u> can mean either "the children are washing themselves" or "the children are washing each other."

4.1.4.2 Reciprocal readings - Complete this section only if your strategy allows a reciprocal reading (i.e., permits a reading like those in (C24a) or (C24f). If the strategy is ambiguous, make sure to use verbs that allow the reciprocal interpretation.
Tigrinya uses a different strategy for reciprocal reading.
a) Which of the following verbs can the strategy be applied to?
It looks like the verb "meet" and "fight" can not take a reciprocal strategy in Tigrinya while the other verbs can.
   C26) "meet", "see", "fight", "speak", "hit"

b) Does the strategy allow the constructions where X is understood to be a reciprocal which has a plural antecedent consisting of John and Bill (i.e., it would be understood as "John and Bill saw each other"). Are both "see" and "meet" possible in (C27), or is only one sort of verb acceptable?
This reading is not possible even with the reciprocal strategy.
   C27) John met/saw X with Bill (Meaning: "John and Bill met/saw each other.")

c) Is there any difference in the range of interpretations permitted for (C28a) as opposed to (C28b), or any difference in reciprocal strategies that support these interpretations? If so, tell us what you think the problem is and provide pairs like these for subsequent tests in this section (and let us know if male/female gender pairings introduce any complications).
In Tigrinya, the reciprocal reading is obtained through the introduction of a different verb form and pronoun; therefore, C28a may favor this strategy as opposed to the regular reflexive strategy. (C28a) has a reciprocal reading while (C28b) has a regular reflexive reading.

   C28a)   joni-n   meri-n   niss-nissat-om/nə-ni-hid-hid-om   tə-mogwagwis-om
              John-and   mary-and   2/3person-f.pl/Acc-OM-one-one-f.pl 3.S-praised.Redup-m.pl
              John and Mary praised X.
     b)   ʔit-ən ʔanisti   ni-ʕarsat-/ni-baʕlat-ən ʔamogis- ən
              D-f.pl women   OM-self-them.f   praised-3f.pl.S
              The women praised X.

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

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

   C29a)   joni-n   meri-n   niss-nissat-om/nə-ni-hid-hid-om   tə-zerarib-om
              John-and   mary-and   2/3person-f.pl/Acc-OM-one-one-f.pl 3-spoke.Redup-m.pl.S
              John and Mary spoke to X.

b) *joni-n   meri-n   nɨss-nɨssat-om/nə-nɨ-hɨd-hɨd-om   tə-raxib-om
John-and   mary-and   2/3person-f.pl/Acc-OM-one-one-f.pl 3.S-met.Redup-m.pl
John and Mary met with X.

c) joni-n   meri-n   nɨss-nɨssat-om/nə-nɨ-hɨd-hɨd-om   ʔɨzz-i   məs'haf
John-and   mary-and   2/3person-f.pl/Acc-OM-one-one-f.pl this-m.sg   book
     tə-wəhahib-om
     3-give.Redup-m.pl.S
John and Mary gave this book to X.

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

C30)   joni-n   meri-n   nɨss-nɨssat-om/nə-nɨ-hɨd-hɨd-om   kəm-zɨ-fətatəww-u
     John-and   mary-and   2/3person-f.pl/Acc-OM-one-one-f.pl COM-3-like.Redup-m.pl.S
     yɨ-hasb-u
     3-think-m.pl
     Bill and Mary think that they like X.

4.1.4.3 Sociative readings

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

C31a)   ʔɨt-ən   ʔahbay   bɨhansab   kəyd- ən
     D-f.pl   baboons   together   left-3f.pl.S
     The baboons left together

b)   ʔɨt-ən   ʔahbay   bɨhansab   ʕasa   bəliʕ- ən
     D-f.pl   baboons   together   fish   ate-3f.pl.S
     The baboons ate fish together

The reciprocal or reflexive strategies are not used in these examples.

4.1.4.4 Antipassive readings

C32a)   ʔɨt-i   gɨsɨlla   səbat   yɨ-nəkɨs
     D-m.sg   panther   people 3m.sg.S-bite
     That panther bites people.

b)   ʔɨt-i   məngɨsti   səbat   yɨ-ʔasɨr
     D-m.sg   government   people 3m.sg.S-arrest
     The government arrests people.

c)   bil   səbat   yə-mogɨs
     Bill   people 3m.sg.S-praise
     Bill praises people

4.2   Cross-clausal binding

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

X4) John expects himself to win.

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

X5) *Jon* bad   oss forsøke å få   deg   til å snakke pent   om   *seg*.
    Jon asked us   try   to get you   to   talk   nicely about SEG
    "Jon asked us to try to get you to talk nicely about him."
X6) Jón segir að Haraldur elski stúlkuna sem hafi kysst sig.
    Jon said that Harald loves-SUBJ the-girl that kissed-SUBJ SIG
    "*Jon* said that Harald loves the girl that kissed *him*."

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

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

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

4.2.1 Coreference relations across typical tensed clausal complement

Please translate each example in this section choosing predicates that seem to most closely match the ones employed below. Check each strategy and supply judgments about the results. Don't forget to use the simple pronoun strategy, which in many languages may be the only one that works.
It may turn out that coconstrual across clauses will reveal a new strategy that does not correspond to any of the ones used up to now. For example, your language may require the use of a particular kind of pronoun to achieve coreference when the antecedent is the thematic believer, speaker or experiencer of a higher verb. A pronoun in a complement to such a verb may not be able to refer back to the antecedent unless it has a form that is not used for clausemate coreference in a matrix clause. If that is the case, then your language probably has "logophors". If you think this is so, say so and we will explore that at a later point.
If the strategy you are testing involves marking on the verb ("verbal reflexive"), take care to apply it to the

embedded clause. In other words, the anaphoric argument should be in the embedded clause, its antecedent in the matrix clause. For example, in French, the reflexive clitic (which counts as a verbal affix in our empirical designation) is on the lower verb in (X8) but its antecedent is <u>Jean</u>, the subject in the higher clause. As it happens, this relationship is unacceptable in French, at least with <u>Jean</u> as the antecedent.

   X8) Jean a   dit que Marie s'aime. (*SE = Jean, OK SE = Marie)
      Jean has said that Marie SE loves
      "Jean said that Marie loves him."

In section 4.1.1.2, you will be asked to construct a sentence like (X9), still with the meaning of (X8) where SE=<u>Jean</u> (the reading with <u>Marie</u> fails for another reason).

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

It seems that the SE strategy in French is stubbornly local, in that the SE argument must be close to its thematic source (it represents the object the verb 'love' of the lower clause) and yet SE must be itself closer to its antecedent than embedding in a tensed sentence allows, so neither reading (<u>Jean</u> or <u>Marie</u> for SE) succeeds in French. What does succeed in French for <u>Jean</u> as antecedent is (X10) (which employs an independent pronoun in the form of a clitic) but not (X11), where the clitic corresponding to the object of "love" has moved from the lower verb to the higher one, again moving too far from its thematic source (the object of 'love'). In other words, it looks like it is a function of clitics, whether SE or pronominal, to be close to their thematic source, but what can count as the antecedent is different, in that SE must have a local antecedent and the clitic pronoun must not.

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

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

In what follows, please be careful to use verbs compatible with the strategy you are testing, as determined by your answers earlier in the questionnaire. If the strategy does not permit a subject argument to be marked, please try to formulate what it would look like and mark it unacceptable according to the strength of your judgment. It is just as important to tell us which readings do not work as it is to tell us which readings do, so please pay particular attention to indicating which is which.

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

   D1a)   jak   (ʕars-/baʕl-u) nɨfuʕ ʔɨyy-ə   ʔɨll-u
         Jack   self-him   smart be-1sg.S   said-3m,sg.S
         Jack said that X is smart.

b) jak   dʒordʒ   (*ʕars-/baʕl-u) kəm-zɨ-fətww-o   yɨ-fəllɨt'
    Jack   George   (self-him)   COM-Re.3m.sg.S-like-3m.sg.O   3m.sg.S-know
    Jack knows that George likes X.

c) jak   (ʕars-/baʕl-u) nɨfuʕ   kəmzxonə   bil   kəm-zɨ-təzarəb-ə   yɨ-fəllɨt'
    jack   (self-him)   smart   be-3m.sg.S   bill   COM-Rel. 3m.sg.S-said-3m.sg.S
    3m.sg.S-know
    Jack knows that Bill said that X is smart.

d) jak   wendi (*ʕars-/baʕl-u) kəm-tɨ-fətww-o   lisa   kəm-tɨ-fəllɨt'   yɨ-ħasɨb
    jack   wendy (self-him)   COM-Rel.3f.sg.S-like-3m.sg.O   Lisa   COM-3f.sg.S-know
    3m.sg.S-think
    Jack thinks that Lisa knows that Wendy likes X.

e) jak   n-alis   (*ʕars-/baʕl-u) kəm-zɨ-fətww-a   lisa   kəm-tɨ-fəllɨt'
    yɨ-ħasɨb
    jack   to-Alice   (self-him)   COM-Rel.3m.sg.S-like-3m.sg.O   Lisa   COM-3f.sg.S-
    know   3m.sg.S-think
    Jack thinks that Lisa knows that X likes Alice.

f) sara   n-jak   lisa   (*ʕars-/baʕl-u) kəm-tɨ-fətww-o   nəgir-at-o
    jack   to-Jack   Lisa   (self-him)   COM-Rel.3f.sg.S-like-3m.sg.O   told-3f.sg.S-
    3m.sg.O
    Sarah told Jack that Lisa loves X.

g) sara   jak   n-wendi   (*ʕars-/baʕl-u) kəm-zɨ-fətww-a   nəgir-at-o
    jack   Jack   to-Wendy   (self-him)   COM-Rel.3m.sg.S-like-3f.sg.O   told-3f.sg.S-
    3m.sg.O
    Sarah told Jack that X loves Wendy.

If any of the above examples, or any analogous examples you provide, are grammatical using a particular coreference strategy, we consider this strategy to be a long-distance coreference strategy. Some subsequent questions depend on whether or not we are dealing with a long distance strategy. For this questionnaire, the term "long-distance strategy" includes ordinary independent pronouns, as in the French case above (and it is what is often employed for English as well), as well as long-distance anaphors (sometimes these are forms used as local reflexives but that can also be used at a distance) and logophors (loosely speaking, pronouns that are used for the person whose perspective is being reported - there will be more on these later). Although there is no morphological marking of the distinction in English, sometimes a difference in factivity makes a difference for what we are studying and we want you to consider this difference. In English, verbs like <u>admit</u> presuppose that the proposition of what is admitted is true (e.g., <u>John admitted that he was guilty</u> implies that he was indeed guilty - adding "but he was mistaken" is very odd) while other verbs do not carry this presupposition (e.g. <u>John suspected he was late, but he was mistaken</u> is not at all odd). If this semantic distinction is marked morphologically in your language, please let us know for the following two "Jack" sentences, and if there is also an additional difference in which coreference strategies succeed, then provide as full a "Jack" paradigm for each verb type in accordance with what is possible.

D2a) jak   meri   kəm-tɨ-fətww-o   ʔamin-u/tə-x'əbill-u
     Jack   mary   COM-Rel.3m.sg.S-like-3f.sg.O   admitted-/PASS-accepted-3m.sg.S
     Jack admitted that Mary loved X.

b) jak   meri   kəm-tɨ-fətww-o   tə-t'ərat'ir-u
    Jack   mary   COM-Rel.3m.sg.S-like-3f.sg.O   admitted/accepted-3m.sg.S

Jack suspected that Mary loved X.

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

D3a) jef   ela   mis-ʔas'əlləm-ətt-o   n-meri   ʔamarir-u-ll-a
     Jeff   Ella   with-blamed-3f.sg.S-3m.sg.O to-Mary   complained-3m.sg.S-PP-3f.sg.O
     Jeff complained about Mary when Ella blamed X

   b) jef   mis-dəxəm-ə/kɨdmi/dɨhri   mɨ-dkam-u   gəza   tə-məmllis-u
     Jeff   with-tired-3m.sg.S/before/after   to-tiring-his   home   PASS-returned-3m.sg.S
     Jeff returned home when/before/after X became tired.

   c) jef   meri   mis-s'əhaf-ət-ll-u /kɨdmi/dɨhri   mɨ-s'haf-a   gəza   tə-məmllis-u
     Jeff   Mary   with-wrote-mf.sg.S-PP-3m.sg.O/before/after to-write-his   home   PASS-returned-

3m.sg.S

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

   d) jef   meri   kəy-raʔəy-ətt-o   kəyd-u
     Jeff   Mary   Neg-see-3f.sg.S-3m.sg.O   left-3m.sg.S
     Jeff left without Mary seeing X.

   e) meri   n-jef   kəy-rəxəb-ətt-o   konin-att-o
     Mary   OM-Jeff   Neg-meet-3f.sg.S-3m.sg.O   condemned-3f.sg.S-3m.sg.S
     Mary condemned Jeff without meeting X.

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

Reciprocals don't seem to wrok in those contexts.

Please also let us know if differences in gender, plurality or person make a difference for which strategy succeeds. For example, if you replace <u>Jack</u> in all of the Jack sentences with first person "I" or second person "you" does the pattern change in any way? If so, we will follow up about this in section 4.4, so set it aside for now.
Change in gender, number or person do not bring any difference in these contexts.
4.2.1.2 Climbing from tensed complements - This test applies particularly to reflexives in close association with a verb, either as affixes or clitic pronouns, but there are some languages where a form of focus movement can place a more an argument-marked anaphor in a higher clause.
Change the examples in the previous section so that the higher verb is marked (but the sentence still expresses coreference with an argument of the embedded clause). For example, this sort of climbing is possible in French if the clause is of a very minimal type (a "small clause"), as in <u>John se croix intelligent</u>, interpreted as "John believes [himself (to be) intelligent.]"

4.2.2 Long distance relations and the variety of clausal embedding types

Consider what a list of major clause embedding types in your language would include. In English, it would include, besides tensed complements like those in the last subsection, infinitives, bare infinitives, gerunds, subjunctives (a lexically restricted class) and small clauses, each of which are illustrated in brackets in (X12).

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X12a) I hope [to leave]

          I hope [for Bill to leave]

          I expect [Bill to be unpleasant]

          I persuaded Bill [to leave]

     b) I made [Bill leave]

     c) I saw [someone leaving]

     d) I require [that he speak softly]

     e) I consider [Bill unpleasant]

In this subsection, we want you to construct sentences along the lines of those presented for tensed clauses above adjusting for the different complement clause types allowed in your language (which may be radically fewer than those in English, or may involve types of complementation not found in English). Then test each clausal type for the success or failure of each coreference strategy.

For subjunctives, if your language permits them and if your language permits them to have lexical subjects, the tests can probably proceed on the model of tensed clause complements. However, some of these clausal types require some adjustments if they require null subjects. For example, in providing data for infinitives (if your language has infinitives), and where X = <u>Edgar</u>, we want you to give us a range of examples where the infinitive subject is not controlled by the matrix subject. In other words, the understood subject of the infinitive (the understood giver or talker) should never be Edgar, but Bill (or else we will actually testing just a clausemate strategy instead of a long distance one). Thus in (D4a), for example, <u>Bill</u> is understood to be the one trusting, and we want to test whether or not X could be <u>Edgar</u>, and if so, which form makes the possible (in English, it is the otherwise independent pronoun <u>him</u>).

D4a)   edgər bil   n-k-amn-o   hatit-u

          Edger Bill   OM-COM-trust-him asked-3m.sg.S

          Edgar asked Bill to trust X.

    b)   edgər bil   məs'haf   nɨ-kɨ-hɨb-o   hatit-u

          Edgar Bill   book   to-COM-give-him   asked-3m.sg.S

          Edgar asked Bill to give a book to X.

    c)   edgər bil   nɨ-kə-zarɨb-o   hatit-u

          Edgar Bill   to-COM-talk-him   asked-3m.sg.S

          Edgar asked Bill to talk to X.

    d)   edgər bil   bɨ-zaʕb-u   nɨ-kɨ-zarəb   hatit-u

          Edgar Bill   by-matter-him to-COM-talk asked-3m.sg.S

          Edgar asked Bill to talk about X.

    e)   edgər bil   n-k-amn-o   tə-s'əby-u

          Edger Bill   OM-COM-trust-him PASS-expected-3m.sg.S

          Edgar expected Bill to trust X.

    f)   edgər bil   nɨ-kɨ-xəfl-o   aziz-u

          Edger Bill   to-COM-pay-him   ordered-3m.sg.S

          Edgar ordered Bill to pay X.

    g)   edgər nɨfuʕ kəm-zɨ-xon-ə   bil   nɨ-kɨ-zarəb   aziz-u

          Edger smart COM-3-be-3m.sg.S Bill   to-COM-talk ordered-3m.sg.S

          Edgar ordered Bill to say that X was smart.

    h)   edgər nɨʕu?-u meri ?afk'ir-att-o   ?ill-u   bil   nɨ-kɨ-zarəb   aziz-u

Edger   self-him Mary loved-3f.sg.S-3m.sg.Obe-3m.sg.O   Bill   to-COM-talk   ordered-3m.sg.S

       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 <u>for</u>) as in (D6), please also provide examples of this type.

  D5a)   edgər   ʕars-/baʕl-u   nɨ-kɨ-ʕɨwət   yɨ-s'ɨb-ə
           Edger   self-him   to-COM-win   PASS-waited-3m.sg.S
           Edgar expects X to win.
    b)   edgər   bil   nɨ-kɨ-sɨʕr-o   yɨ-s'ɨb-ə
           Edger   Bill   to-COM-defeat-him   3-waited-3m.sg.S
           Edgar expects Bill to defeat X.
  D6a)   edgər   ʕars-/baʕl-u   kəm-zɨ-ʕɨwət   yə-təsf-u
           Edger   self-him   COM-3-win   3-hope-m.sg.S
           Edgar hopes for X to win.
    b)   edgər   bil   kəm-zɨ-sɨʕr-o   yə-təsf-u
           Edger   Bill   COM-3-defeat-him   3-hope-m.sg.S
           Edgar hopes for Bill to defeat X.

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

  D7a)   edgər   bil   nɨ-haw-u   nɨ-kɨ-sɨʕr-o   yɨ-s'ɨb-ə
           Edger   Bill   to-brother-his to-COM-defeat-him   3-waited-3m.sg.S
           Edgar expects Bill to defeat X's brother.
    b)   edgər   bil   nɨ-haw-u   kəm-zɨ-sɨʕr-o   yə-təsf-u
           Edger   Bill   to-brother-his COM-3-defeat-him   3-hope-m.sg.S
           Edgar hopes for Bill to defeat X's brother.
    c)   edgər   haw-u   nɨ-kɨ-sɨʕr-o   yɨ-s'ɨb-ə
           Edger   brother-his   to-COM-defeat-him   3-waited-3m.sg.S
           Edgar expects X's brother to defeat him.
    d)   edgər   bil   nɨ-haw-u   kəm-zɨ-sɨʕr-o   yə-təsf-u
           Edger   Bill   to-brother-his COM-3-defeat-him   3-hope-m.sg.S
           Edgar hopes for Bill to defeat X's brother.

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

  D5c)   edgər   ʕars-/baʕl-u   yɨ-s'ɨb-ə   kɨ-sɨʕr
           Edger   self-him   3-expect-m.sg.S   COM-defeat
           Edgar X-expects to win.
    d)   edgər   ʕars-/baʕl-u   yɨ-s'ɨb-ə   bill   nɨ-kɨ-sɨʕr

| Edger | self-him | 3-expect-m.sg.S | Bill | to-COM-defeat |

Edgar X-expects Bill to defeat.

D6c) edgər ʕars-/baʕl-u yə-təsf-u kəm-zɨ-sɨʕr

Edgar self-him 3-hope-m.sg.S COM-3-defeat

Edgar X-hopes for to win.

d) edgər ʕars-/baʕl-u yə-təsf-u bill nɨ-kɨ-sɨʕr

Edgar self-him 3-hope-m.sg.S Bill to-COM-defeat

Edgar X-hopes for Bill to defeat.

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

D8a) tom ʕars-/baʕl-u bɨlhi kəm-zɨ-xon-ə yɨ-xosʼɨr

Tom self-him intelligent COM-3-be-3m.sg.O 3-consider-m.sg.S

Tom considers X intelligent.

b) ? tom meri kəm-tə-fkʼɨr-o yɨ-xosʼɨr

Tom Mary COM-3-love-3m.sg.O 3-consider-m.sg.S

Tom considers Mary fond of X.

c) ? tom n-meri kəm-zə-naded-a yɨ-xosʼɨr

Tom to-Mary COM-3-angry-3f.sg.O 3-consider-m.sg.S

Tom considers Mary angry at X.

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

Note: If your language permits verb serialization, special issues may arise for some of the questions we have been raising. If this is the case, please let us know that verb serialization is possible in your language and alert us to any sorts of patterns that you think we might be interested in. We will address these issues in follow up research.
Tigrinya does seem to allow verb serializations but am not sure whether that has effect on the different strategies employed to encode reflexives or reciprocals.

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. Your language may not have a verb like <u>implicate</u>, but if so, try a verb that seems close, if possible. If your language does not permit clauses to be subjects without head nouns, then try something like "the fact that X was late upset Oliver." *English permits the independent pronouns strategy to be used for such cases, but not all speakers like every example.*

D9a) (nɨssu) mɨ-dɨnguway-u nɨ-oliber anadid-u-wwo

(He) CM-late-his to-Oliver upset-3m.sg.S-3m.sg.O

That X was late upset Oliver.

b) (nɨssu) mɨ-dɨnguway-u zərʔɨyy-o oliber gəbənəNa mɨnbar-u ʔɨyy-u

(He)	CM-late-his	show-his	Oliver guilty	was-3m.sg.S	be-3m.sg.S

That X was late suggested that Oliver was guilty.

c) (nɨssu) mɨ-dɨnguway-u   oliber gəbənəNa   kɨməsɨl gəyr-u-wwo

    (He)   CM-late-his   Oliver guilty   seem did-3m.sg.S-3m.sg.O

    That X was late made Oliver look guilty.

d) (nɨssu) mɨ-dɨnguway-u   n-oliber   yə-k'alɨ?

    (He)   CM-late-his   to-Oliver   3 m.sg.S -implicate

    That X was late implicated Oliver.

Section 4.3 Principle C-type effects

In English it is not possible to interpret <u>he</u>=<u>Malik</u> or <u>he</u>=<u>the boy</u> 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 <u>Malik</u> or <u>the boy</u>.

It does not seem possible in Tigrinya 'he/his' to refer to 'the boy' or 'Malik'.

  E1a) He criticized Malik.

    b) He said Mariam criticized Malik.

    c) He criticized the boy.

    d) He said Mariam criticized the boy.

  E2a) His mother criticized Malik.

    b) His mother said Mariam criticized Malik.

    c) His mother criticized the boy.

    d) His mother said Mariam criticized the boy.

  E3a) The man who he liked criticized Malik

    b) The man who he liked criticized the boy.

    c) The man who liked him criticized the boy.

Now consider whether or not, in place of the pronoun, the name <u>Malik</u> could work as the antecedent for either <u>Malik</u> or <u>the boy</u> could work as the antecedent for <u>the boy</u> 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 n-malik   nəx'if-u-wwo

         Malik OM-Malik   criticize-3m.sg.S-3m.sg.O

         Malik criticized Malik.

   b) *   malik maryam   n-malik   nəx'if-a-tto   ʔill-u

        Malik Mariam   OM-Malik   criticize-3f.sg.S-3m.sg.O   said-3m.sg.S

        Malik said Mariam criticized Malik.

   c) *   ʔɨt-i   wəddi nə-t-i   wəddi nəx'if-u-wwo

        D-m.sg   boy   OM-D-m.sg boy   criticized-3m.sg.S-3m.sg.O

        The boy criticized the boy.

   d)   ʔɨt-i   wəddi maryam   nə-t-i   wəddi nəx'if-u-wwo   ʔill-u

        D-m.sg   boy   Mariam   OM-D-m.sg boy   criticized-3m.sg.S-3m.sg.O   said-

3m.sg.S

The boy said Mariam criticized the boy.

E5a) ʔaddə malik n-malik nəxʼif-a-tto
MotherMalik OM-Malik criticize-3f.sg.S-3m.sg.O
Malik's mother criticized Malik.

b) ʔaddə malik maryam nə-malik nəxʼif-a-tto ʔill-a
MotherMalik Mariam OM-Malik criticize-3f.sg.S-3m.sg.O said-3m.sg.S
Malik's mother said Mariam criticized Malik.

c) ʔaddə-t-i wəddi nə-t-i wəddi nəxʼif-a-tto
Mother-D-m.sg boy OM-D-m.sg boy criticize-3f.sg.S-3m.sg.O
The boy's mother criticized the boy.

d) ʔaddə-t-i wəddi maryam nə-t-i wəddi nəxʼif-a-tto ʔill-a
Mother-D-m.sgboy Mariam OM-D-m.sg boy criticize-3f.sg.S-3m.sg.O said-3m.sg.S
The boy's mother said Mariam criticized the boy.

E6a) ʔɨt-i malik zɨ-fətw-o səbʔay n-malik nəxʼif-u-wwo
D-m.sg Malik Rel-liked-3m.sg.O man OM-Malik criticize-3m.sg.S-3m.sg.O
The man who Malik liked criticized Malik

b) ʔɨt-i ʔɨt-i wəddi zɨ-fətw-o səbʔay nə-t-i wəddi nəxʼif-u-wwo
D-m.sg D-m.sg boy Rel-liked-3m.sg.O man OM-D-m.sg boy criticize-3m.sg.S-3m.sg.O

The man who the boy liked criticized the boy.

c) ʔɨt-i nə-t-i wəddi zɨ-fətw-o səbʔay nə-t-i wəddi nəxʼif-u-wwo
D-m.sg D-m.sg boy Rel-liked-3m.sg.O man D-m.sgboy criticize-3m.sg.S-3m.sg.O
The man who liked the boy criticized the boy.

Now consider whether <u>the boy</u> = <u>Malik</u> for the following examples
None of these examples refer to the boy=Malik in Tigrinya.

E7a) The boy criticized Malik.
b) The boy said Mariam criticized Malik.
c) Malik criticized the boy.
d) Malik said Mariam criticized the boy.

E8a) The boy's mother criticized Malik.
b) The boy's mother said Mariam criticized Malik.
c) Malik's mother criticized the boy.
d) Malik's mother said Mariam criticized the boy.

E9a) The man who the boy liked criticized Malik
b) The man who Malik liked criticized the boy.
c) The man who liked Malik criticized the boy.
d) The man who liked the boy criticized Malik

4.4 More on long distance anaphor strategies

Strategies that allow coreference across tensed clause boundaries, but where the marked argument is one that is not a typical pronoun, we will call "long distance anaphor strategies", hereafter, LDA strategies. In some languages, the LDA form is the same form that is used in clausemate anaphora, while in some cases, the LDA form is that of a pronoun of a special type or else it is an anaphor of a type that may be used in a more local strategy as well (to form reflexives, for example) . In many other languages, such as English, there is no long distance anaphor, and the independent pronoun strategy is used.

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

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

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

I don't think Tigrinya has any logophoric pronouns that serve the same purpose.

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= <u>he</u> or <u>him</u>). If your language is like English, then the reflexive form does not work in the position of X where X=<u>Zeke</u>. 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) leri   mayk (nɨʕɨʔu)   kəm-zəy-fətw-o   nɨ-leri   nəgir-u-wwo
        Larry Mike (him)   COM-Neg-liked-3m.sg.O   to-Larry   told-3m.sg.S-3m.sg.O
        Larry told Zeke that Mike does not like X.

    b) zeki   mayk (nɨʕɨʔu)   kəm-zəy-fətw-o   nɨ-leri   nəgir-u-wwo
        Zeke Mike (him)   COM-Neg-liked-3m.sg.O   to-Larry   told-3m.sg.S-3m.sg.O
        Zeke told Larry that Mike does not like X.

    c) zeki   nɨ-mayk   kəm-zəy-fətw-o   nɨ-leri   nəgir-u-wwo
        Zeke to-Mike   COM-Neg-liked-3m.sg.O   to-Larry   told-3m.sg.S-3m.sg.O
        Zeke told Larry that X does not like Mike.

    d) leri   zeki   nɨ-mayk   kəm-zəy-fətw-o   (nɨʕɨʔu)   nəgir-u-wwo
        Larry Zeke to-Mike   COM-Neg-liked-3m.sg.O   (him)   told-3m.sg.S-3m.sg.O
        Larry told Zeke that X does not like Mike.

    e) leri   mike   n-zeki kəm-zay-fətww-o   zeki   kəm-zɨ-hasɨb   yɨ-fəllɨt'
        Larry mike   to-Zeke COM- 3f.sg.S- Neg-like-3m.sg.O   Zeke   COM-3f.sg.S-know
  3m.sg.S-think
        Larry knows that Zeke thinks that Mike does not like X.

    f) zeki   mike   n-zeki kəm-zay-fətww-o   leri   kəm-zɨ-hasɨb   yɨ-fəllɨt'
        Zeke mike   to-Zeke COM-3f.sg.S-like-3m.sg.O Larry COM-3f.sg.S-know   3m.sg.S-think
        Zeke knows that Larry thinks that Mike does not like X.

D12a) adde   zeki   mike (nɨʕɨʔu)   kəm-zay-fətww-o   tɨ-hasɨb

mother Zeke Mike (him)   COM-3f.sg.S-Neg-like-3m.sg.O   3f.sg.S-think

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

b) adde   zeki   n-mike   (nɨssu)   kəm-zay‑fətww-o   tɨ-hasɨb
mother Zeke   to-Mike   (he)   COM-3f.sg.S-Neg-like-3m.sg.O   3f.sg.S-think

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

c) zeki   mike   kəm-zay‑fətww-o   yɨ-hasɨb
Zeke   Mike   COM-3f.sg.S-Neg-like-3m.sg.O   3m.sg.S-think

Zeke thinks that Mike does not like X.

d) * nay   zeki   debdabe   mike   ʔay-fətww-o-n   ʔill-a
of   Zeke   letter   Mike   Neg-like-3m.sg.O-Neg   said-3m.sg.S

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

e) zeki   meri   kəm-zay‑t‑fətww-o   səmiʔ-u
Zeke   Mary   COM-Neg-3f.sg.S-like-3m.sg.O   heard-3m.sg.S

Zeke heard that Mary did not like X.

f) zeki   meri   kəm-zay‑t‑fətww-o   tə-nəgir-u-wwo
Zeke   Mary   COM-Neg-3f.sg.S-like-3m.sg.O   PASS-told-3m.sg.S-3m.sg.O

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

D13a) zeki   (ʕars-əy)   tə-xəddin-ə   nəyr-ə   ʔill-u
Zeke   (self-my)   PASS-dressed-1sg.S   was-1sf.S   said-3m.sg.S

Zeke said that X had dressed X.

b) zeki   (ʕars-əy)   k'osill-ə   nəyr-ə   ʔill-u
Zeke   (self-my)   wonded-1sg.S was-1sf.S   said-3m.sg.S

Zeke said that X had wounded X.

c) zeki   (ʕars-əy)   tə-wək'k'it'-ə   nəyr-ə   ʔill-u
Zeke   (self-my)   PASS-tatooed-1sg.S   was-1sf.S   said-3m.sg.S

Zeke said that X had tatooed 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).
This non-subject syntactic position doesn't seem to be available in Tigrinya.

4.4.2 Antecedent properties

4.4.2.1 Person - Please replace Zeke in the Zeke paradigm of 4.4.1 with first and second person pronouns, and report the results. Even if most of the examples pattern exactly as third person cases do, please be careful to include sentences corresponding to (D13) in the Zeke paradigm.
Replacing 'Zeke" with first person singular seems perfectly grammatical in Tigrinya.
4.4.2.2 Quantified antecedents - Review the examples in the Jack, Zeke and Edgar paradigms, replacing these names with "every child" and "no child" or "many children". Report all examples that differ in acceptability from the examples you have already provided for those paradigms. If there are no differences, just provide a few representative examples.
Tigrinya successed in replacing the above personal names with quitified antecedents. At this point there is no variation in acceptability even with covert pronouns, which is possible in Tigrinya.

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

4.4.2.3 Split antecedents - Sometimes coreference is permitted when the antecedents for the anaphor or pronoun are separate arguments. Please provide examples that correspond to those in the Ozzie (male) and Harriet (female) paradigm. In all cases, X = Ozzie and Harriet (together). For example, in English, (D14d) would be "*Ozzie* told *Harriet* that Bill dislikes *them*," where <u>them</u> would be Ozzie and Harriet.

D14a) *Ozzie talked about Harriet to X.
    b) *Ozzie talked about X to Harriet.

    c)   ozi   n-haret   (*niʕiʔom)   ki-n-lək'k'ix'   ʔallə-nna   ʔill-u-wwa
           Ozzie to-Harriet   (them)   Fut-1.pl.S-leave   COP-1pl   said-3m.sg.S-3f.sg.O
           Ozzie told Harriet that X should leave.

    d)   ozi   bil   (niʕiʔom)   kəm-zi-s'əlʔ-om   n-haret   nəgir-u-wwa
           Ozzie Bill   (them) COM-3f.sg.S-dislike-3m.pl.O   to-Harriet   told-3m.sg.S-3f.sg.O
           Ozzie told Harriet that Bill dislikes X.

    e)   ozi   bil   (niʕiʔom)   kəm-zi-s'əlliʔ-om   haret tiħ-hasɨb   ʔill-u
           Ozzie Bill   (them)   COM-3f.sg.S-dislike-3m.pl.O Harriet 3f.sg.S-think said-3m.sg.S
           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)   mark wədd-u   dəhan sil-zəy-nəbər-ə   fəriħ-u
        Mark son-his   safe COM-Neg-was-3m.sg.S   feared-3m.sg.S
        Mark feared that his son was not safe.
        nay-kərəba   ʔazmad-u   kə-ʕx'ub-om silə-zəy-kaʔall-ə   ħafir-u
        Of-close   relative-his   protect-them COM-Neg-able-to-do-3m.sg.S   ashamed-3m.sg.S
        He was ashamed that he could not protect his closest relative.
        dək'k'i   akotat-u   ʔintay yi-ħasbiʔ-u-wwo
        children   ancle-his   what 3f.sg.S-think-3m.pl.S-3m.sg.O
        What would his cousins think of him?

D16)   mark siʔl-u   ʔab-t-i   wərəx'ət   mis-rəʔay-ə   tə-dəns'iy-u
        Mark picture-his   at-D-m.sg   paper   with-saw-3m.sg.S   PASS-shocked-3m.sg.S
        Mark was shocked to see his picture in the paper.
        Kull-om   dəgəft-u   kəglil-u-wwo   ʔɨyy-om
        All-them   supporters-his abandon-3m.sg.S-3m.pl.O   be-3m.pl.S
        All of his supporters would abandon him.
        kəməy ʔɨyy-u   nədiʔ-u   zi-nəgir
        how   be-3m.sg.S   mother-his   Rel-3/2person-tell
        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)   moris lomaʕanti   n-mark   məʃəgərit   məʕalti   nəyr-a   ʔill-u
       Morris today   to-Mark   difficult   day   was-3f.sg.S   said-3m.sg.S
       Morris said it was a difficult day for Mark.
       fələma, moris makinniʔ-u   kəm-zi-tə-sərəx'-ət   nəgir-u-wwo
       first   Morris car-his   COM-Rel-3f.sg.S-PASS-stolen   told-3m.sg.S-3m.sg.O
       First, Morris told him that his car had been stolen.
       dəħriʔu,   n-sərah   ʔɨ -ti-wəssd-o   tax'si   ki-x'os'ir   nəyr-u-wwo
       then   to-work   COM-3f.sg.S-took-3m.sg.O taxi   Fut-hire   was-3m.sg.S-

3m.sg.O
       Then he had to hire a taxi to take him to work.
       Moris ħarix'-u   kəm-zi-xəwin   ħasib-u
       Morris upset-3m.sg.S COM-3m.sg.S-be   thought-3m.sg.S
       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: rəʔəy mark   ʔall-o
            Look   Mark   exist-3m.sg.O
            Look, there's Mark!
     B: bət'aʕmi   k'ondʒo   ʔiyy-u
            Very   handsome   be-3m.sg.S
            He is so handsome.
     A: səbəyt-u   gin   ki-xəwin   ʔay-dəll-in.
            Woman-his   but   Fut-become   Neg-want-Neg.
            I would not want to be his wife though.
            kull-ən   ʔanɨsti   ʔiyy-ən   zə-ssadɨdə-ʔo
            all-f.pl   women   be-f.pl   Rel-chase-3m.sg. 3m.sg.O
            All the women are chasing him.
     B: bətəwəsaxi   ʕars-u   ʔazɨyy-u   zi-niʔid   ʔill-ə   yɨ-hasɨb
            Moreover   sel-him   very-m   Rel-praise   be-1sg.S   1/3sg-think
            Also, I think he praises himself too much.

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?

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It looks like the reflexive – both covert and overt pronoun – strategies are predominatly used.

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.
In all these cases the pronoun seems optional.

D19a)   leri   joni   (niʕiʔu)   kəm-zə-xbɨr-o   yɨ-ħasɨb
           Larry   John   (him)   COM-Rel-respect-3m.sg.O   3m.sg.S-think
           Larry thinks that John respects X.

     b) leri   ʔane   (niʕiʔu)   kəm-zə-xbɨr-o   yɨ-ħasɨb
           Larry   I   (him)   COM-Rel-respect-3m.sg.O   3m.sg.S-think
           Larry thinks that I respect X.

     c) leri   meri   (niʕiʔu)   kəm-tə-xbɨr-o   yɨ-ħasɨb
           Larry   Mary   (him)   COM-Rel-respect-3m.sg.O   3m.sg.S-think
           Larry thinks that Mary respects X.

     d) leri   ʔit-om ʔawədat   (niʕiʔu)   kəm-zə-xbɨr-u-wwo   yɨ-ħasɨb
           Larry   D-m.pl boys   (him)   COM-Rel-respect-3m.sg.S-3m.sg.O   3m.sg.S-think
           Larry thinks that the boys respect X.

     e) ʔit-om sebʔut ʔit-om ʔawədat   (niʕiʔom)   kəm-zə-xbɨr-u-om   yɨ-ħasɨb -u
           D-m.pl men   D-m.pl boys   (them)   COM-respect-3m.sg.S-3m.pl.O
   3m.pl.S-think-3m.pl.S
           The men think that the boys respect X. (X = the men)

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

D20a)   leri   dawit   (niʕiʔu)   kəm-zə-xbɨr-o   ʔbil   kəm-zə-fəllɨrtʼ   yɨ-ħasɨb
           Larry   Dave   (him)   COM-respect-3m.sg.O Bill   COM-know-3m.sg.O 3m.sg.S-think
           Larry thinks that Bill knows that Dave respects X.

     b) leri   dawit   (niʕiʔu)   kəm-zə-xbɨr-o   ʔane   kəm-zə-fəllɨrtʼ   yɨ-ħasɨb
           Larry   Dave   (him)   COM-respect-3m.sg.O I   COM-know-3m.sg.O 3m.sg.S-think
           Larry thinks that I know that Dave respects X.

     c) leri   dawit   (niʕiʔu)   kəm-zə-xbɨr-o   meri   kəm-tə-fəllɨrtʼ   yɨ-ħasɨb
           Larry   Dave   (him)   COM-respect-3m.sg.O Mary COM-know-3f.sg.O   3m.sg.S-think
           Larry thinks that Mary knows that Dave respects X.

     d) leri   dawit   (niʕiʔu)   kəm-zə-xbɨr-o   ʔit-om   ʔawodat
           Larry   Dave   (him)   COM-respect-3m.sg.O D-m.pl   boys
               kəm-zə-fəllɨrtʼ-u   yɨ-ħasɨb
               COM-know-3m.sg.O 3m.sg.S-think
           Larry thinks that the boys know that Dave respects X.

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e) ?it-om seb?ut dawit (niʕiʔom)   kəm-zə-xbɨr-om   ?it-om   ?awodat
    D-m.pl men   Dave   (them)   COM-respect-3m.sg.O D-m.pl   boys
         kəm-zə-fəllɨt'-u   yɨ-ħasɨb-u
         COM-know-3m.sg.O   3m.sg.S-think-3m.pl.O
    The men think that the boys know that Dave respects. (the men = X)

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

The following examples rely only on person mismatches (where X = Walter). If you also found number or gender mismatches above, give some examples. Once again, if all of these examples are only acceptable with the independent pronoun strategy, then just say so and provide translations.

The independent pronoun strategy is used here as well except in (D21d). note the optionality of those prounouns.

D21a) walter dawit (niʕiʔu) kəm-zə-xbir-o   bil   n-hari   kəm-zi-nəgər-o
      W   Dave (him(self))   COM-respect-3m.sg.O Bill   to-Harry   COM-told-3m.sg.OM
          yɨ-ħasɨb
          3m.sg.S-think
      Walter thinks that Bill told Harry that Dave respects X.
   b) walter dawit (niʕiʔu)   kəm-zə-xbɨr-o   bil   n-ʕay kəm-zə- nəgər-nni
      W   Dave   (him)   COM-respect-3m.sg.O Bill   to-me   COM-told-1sg.O
          yɨ-ħasɨb
          3m.sg.S-think
      Walter thinks that Bill told me that Dave respects X.
   c) walter dawit (niʕiʔu)   kəm-zə-xbɨr-o   n-ʕay nəgir-u-nni
      W   Dave   (him)   COM-respect-3m.sg.O   to-me   told-3m.sg.S-1sg.O
      Walter told me that Dave respects X.
   d) walter dawit bɨzaʕb-u   zi-təs'ahfə   məs'ħaf   n-ʕay hib-nni   ?ill-u
      W   Dave   abou-him   Rel-wrote-3msgS   book   to-me gave-3m.sg.O   said-
3m.sg.S
      Walter said that Dave gave me a book about X.

4.4.4 Islands

Do syntactic islands affect the acceptability of the current strategy? For all the examples in this section, Ira = X. As in 4.3, if the independent pronoun strategy is all that works, please say so, translate, and move on, but if more than one strategy works, please let us know which ones do. Also, if your language permits more than one type of pronoun, be sure to test both kinds (including null arguments interpreted pronominally).

The independent pronoun strategy is the one that seems at play with the following examples. Note that the pronoun is sometimes optional and sometimes not required except in indirect question type (cf.(D2d)).

D22a) ira   meri   (?? niʕʔa)   sɨlə-tɨ-s'əlʔ-a   təx'əym-a
      Ira   Mary   (?? her(self))   COM-Rel-3f.sg.S-hate-3f.sg.O   resent-3m.sg.S
      Ira resents the fact that Mary hates X.
   b) ira   nə-t-i   (?? niʕʔa)   z-fət-wa   səbʔay   tə-xɨbbɨr

Ira	OM-D-m.sg	(?? her(self))	Rel-like-3f.sg.O	man	PASS-3f.sg.S-respect

Ira respects the man who likes X.

c) ira ʔɨt-i (?? niʕʔa) z-fət-wa səbʔay bəliħ ʔɨyy-u tɨ-bɨll
    Ira D-m.sg (?? her(self))) Rel-like-3f.sg.O man smart be-3m.sg. 3f.sg.S-say

Ira says that the man who likes X is intelligent.

d) ira bil *(niʕʔa) tə- riʔ-u-wa ħatit-a
    Ira Bill (her(self)) COM-saw-3m.sg.S-3f.sg.O asked-3f.sg.S

Ira asked whether Bill saw X.

e) ira məʕas bil (niʕʔa) kəm-zɨ-rəʔəyy-a ħatit-a
    Ira when Bill (her(self)) COM-Rel-saw-3f.sg.S asked-3f.sg.S

Ira asked when Bill saw X.

f) ira dʒordʒ (niʕʔa) kəm-zɨ-səʕab-a ʔay-tə-gənzəb-ət-in
    Ira George(her(self)) COM-Rel-followed-3f.sg.O Neg-PASS-realized-3f.sg.S-Neg

Ira did not realize that George followed X.

g) ira meri s'ɨbx'ti kəm-zɨ-xon-ət-in (?? niʕʔa)
    Ira Mary beautiful COM-Rel-be-3f.sg.O-and (?? her(self))
        kəm-tɨ-mirʔow-a-n təzarib-a
        COM-Rel-3f.sg.S-marry-3f.sg.O-and said-3f.sg.S

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

4.4.5 De se reading

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

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

Now <u>his</u> in both examples is to be coconstrued with Oedipus, but <u>his mother</u> in (23a) refers to Bio, whom he does not know is his mother, while (D23b) refers to Step, who is the only one Oedipus thinks is his mother (though others know otherwise), and Oedipus is angry at her just now. In some languages, a different morphological form, a different pronoun for example, is used to distinguish the two readings. If your language is like English, then there is no morphological distinction between the pronouns in (D23a,b). Just say so and move on.
However, other languages have such a morphological distinction (often it is like the logophoric distinction, discussed above, but not always). For example, Adésolá (2004) reports that Yoruba permits a non-logophoric

pronoun (a weak pronoun) to be coconstrued with the matrix subject, but the logophoric marked one (the strong pronoun) is still distinguished insofar as it must be *de se*. The verb meaning 'believe' selects for the logophoric complementizer *pé* and the pronouns are distinguished as weak (w) and strong (s).

D24a) Olú gbàgbó pé ilé   rè   ti wó.
     Olu believe that house he(w) ASP fall
  b) Olú gbàgbó pé ilé   òun   ti wó.
     Olu believe that house he(s) ASP fall
    Both: "Olu believes that his house has collapsed."

As Adésolá remarks, "...a strong pronoun [*òun*] is used when self-reference is intended by the reported speaker (or believer) [15b], while a weak pronoun [*rè*] is used when the reported speaker (or believer) does not know that he was in fact referring to his own house [15a]." The weak pronoun does not have to refer to Olu, but the strong one must.

If there is such a distinction in your language, then translate the examples indicating the difference in pronouns and we will ask you more about it after we get the questionnaire responses. If you don't understand what is asked for in this section, skip it or ask for assistance.

I don't think there are any logophoric or non-logophoric pronouns that can be conconstrued with the matrix subject in Tigrinya.

PART 5 Final thoughts

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

In general, Tigrinya, like English, uses the independent reflexive prnoun to encode reflexive reading. However, unlike English, Tigrinya uses other strategies such as the causative, passive etc. with special form of the verb to express reciprocal reading as well. For example, Tigrinya favours the causative and passive strategies for grooming verbs with plural arguments.

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

The questionnaire is pretty readable, and explores very interesting ideas in the relm of anaphors. Nevertheless, it is regorous and time taking!