In this paper, I discuss some aspects of argument structure and agreement in Masarak. The main focus will be on which forms mark which relations, with less emphasis on other aspects of the syntax, such as word order, focus, question formation, etc. The paper is organized topically, with different sections discussing different kinds of constructions. For more detailed areas, I have divided sections into an ‘overview’ and ‘additional discussion’ subsection, and occasionally an ‘open questions’ subsection (or some other related subsection). This is intended so that various sections can be read more or less independently of each other, although most of the paper presupposes the content of the alignment and agreement sections. The only section that presupposes a fair amount of theoretical linguistics is section 3.3. The paper is organized as follows.

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1 Alignment

1.1 Overview

The basic alignment of Masarak is NOMINATIVE-ACCUSATIVE. In this section, I illustrate this with pronominal forms. There are markers for ‘object’ or ‘accusative’ which attach to non-pronominal DPs. These are NOMINATIVE-ACCUSATIVE in alignment as well, but I will not discuss those forms specially here (but see section 1.3). The following table shows the personal pronoun forms.

(1) Personal Pronouns

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>ACC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>ama</td>
<td>amboro</td>
</tr>
<tr>
<td></td>
<td>mañ</td>
<td>mboro</td>
</tr>
<tr>
<td></td>
<td>ti</td>
<td>tiro</td>
</tr>
<tr>
<td>PL</td>
<td>mi</td>
<td>mnta(ô)</td>
</tr>
<tr>
<td></td>
<td>ki</td>
<td>knta(ô)</td>
</tr>
<tr>
<td></td>
<td>i</td>
<td>nta(ô)</td>
</tr>
</tbody>
</table>

The plural accusative forms vary as to whether they are pronounced with a diphthong [au] or with a monophthong [a]. It is unclear what, if anything, constrains this alternation. There is no special form for dual, nor is there an inclusive/exclusive distinction. 3rd person pronouns are insensitive to gender.
Nominative (or ‘subjective’) forms are the same for unergative and unaccusative verbs.\(^2\)

This is shown for ‘swim’ and ‘fall’.

\(2\) **Unergative Subject Forms**

a. **ama** a-dil-e-na
   1SG.SUB-swim-PST
   ‘I swam.’

b. **maŋ** Ø-dil-e-na
   you 2SG.SUB-swim-PST
   ‘You swam.’

\(3\) **Unaccusative Subject Forms**

a. **ama** a-daR-a
   1SG.SUB-fell-PST
   ‘I fell.’

b. **maŋ** Ø-daR-a
   you 2SG.SUB-fell-PST
   ‘You fell.’

c. **ti** ta-daR-a
   he 2SG.SUB-fell-PST
   ‘He fell.’

The following examples show that the subjective/nominative forms seen in intransitives are used on the subjects of transitives.

\(4\) **NOMINATIVE-ACCUSATIVE alignment of transitives**

a. i. **tiro** wa-ndesir-na
   they him 3PL.SUB-anger-PST
   ‘They angered him.’

   ii. **ti** inta ta-ndasir-na
       he them 3SG.SUB-anger-PST
       ‘He angered them.’

b. i. **ama mboro** Ø-mba-ndesir-na
   I you 2SG-INV2-anger-PST
   ‘I angered you.’

   ii. **maŋ amboro** a-nde-ndesir-na
       you me 1-INV1-anger-PST
       ‘You angered me.’
1.2 Additional Discussion

The examples above are psychological causatives, which, based on cross-linguistic considerations, might be expected to behave differently with respect to case marking. The following examples show that the same case marking pattern arises with other kinds of transitives.

(5) a. ti mada to-ro-na
   he alcohol 3SG.SUB-buy-PST
   ‘He bought the alcohol.’

b. ti aşugu t-oi-a
   he fly 3SG-kill-PST
   ‘He killed the fly.’

c. ti tiro tu-rsor-na
   he her 3SG.SUB-wait-PST
   ‘He waited for her.’

d. ti kuʧu tu-xoŋaŋ-a
   he bird 3SG.SUB-shoot-PST
   ‘He hit the bird (e.g. with a rock).’

While there does not seem to be any difference in case marking between unergatives and unaccusatives, unergatives, unlike any unaccusatives I have seen, show an alternation between intransitive ‘incorporated’ forms and transitive ‘unincorporated’ forms.3

(6) a. ama a-dil-ı-na
   I 1SG.SUB-swim-PST
   ‘I swam.’

b. ama dildil a-na
   I swim 1SG.SUB-did
   ‘I swam.’

(7) a. maŋ Ø-dil-ı-na
   you 2SG.SUB-swim-PST
   ‘You swam.’

b. maŋ dildil ge-na
   you swim 2SG.SUB-did
   ‘You swam.’

(8) a. ti ti-ser-ı-na
   he 3SG.SUB-swim-PST
   ‘He swam.’

b. ti dildil tə-ı-na
   he swim 3SG.SUB-did
‘He swam.’

(9) a. ki ki-séré-na
you.PL 2PL-swim-PST
‘You.PL.SUB swam.’
b. ki dildil kë-na
you.PL swim 2PL-did
‘You.PL.SUB swam.’

(10) a. mi mi-séré-na
we 1PL.SUB-swim-PST
‘We swam.’
b. i i-séré-na
they 3PL.SUB-swim-PST
‘They swam.’

Two issues arise with respect to agreement. First, the unincorporated ge- in 2nd person singular becomes Ø- in the incorporated version. Since both forms occur independently, this is not particularly troublesome. Second, the stem form changes in the incorporated version for 3rd person singular and plural (from -dilena to -serena). There does seem to be some meaning difference, where the incorporated version is somehow ‘more basic’, but I am not sure exactly what this difference is.

Wadley (2010b) provides another example of this sort. The word ganu/gani ‘instance’ here is literally ‘ground’.

(11) a. ti gandogo ganu ti:lo-(dr) tʃoko tɛ:n-a
he yesterday instance one-(only) cough 3SG.SUB-do/make-PST
‘He coughed (only) once.’
b. gani mbara-(dr) tu-tʃa:-na
instance two-(only) 3SG.SUB-cough-PST
‘He (only) coughed twice.’

1.3 Open Questions

With some psychological predicates, we see oblique subjects, which alternate with subjective forms with no reported meaning difference.

(12) Oblique Subject Alternation
a. ama nijembo a-ndo-na nde
I very 1-INV 1-well-NEG.PRS
‘I feel sick/upset.’
b. **amboro** nijembo a-ndo-ma-nde
   me very 1-INV 1-well-NEG.PRS
   ‘I feel sick/upset.’
c. **jaja-ko** **tiro** to-ma-nde
   Yahya-ACC him 3SG.SUB-well-NEG.PRS
   ‘Yahya, he’s sick.’

Interestingly, the alternation does not appear to have an effect on agreement. The examples in (12a-b) both show object agreement, despite the alternation in case. The examples in (12c), which is 3rd person, shows subject agreement. (See below on object vs. subject agreement.) In addition, this example involves topic doubling, where the topic **jaja-ko** ‘Yahya’ is doubled by the pronoun **tiro**. This is interesting in light of the generalization proposed by Leffel (2010a), which says that only clause-initial subjects can be topic doubled; if so, these oblique arguments do share that subject property with non-oblique subjects.4 So far, all cases of oblique subjects I have seen are optionally non-oblique. This requires further research, however, and I will not discuss it further here.

Another question about case-marking which has arisen involves situations where two internal arguments would be marked with the objective suffix -ko. In the following examples, where either internal argument could in principle be marked with -ko, the direct object is marked with -o instead.5 Either order of the two arguments is possible.

(13) a. ti **kaltam-ko** **hawa-ʊ** ti-ɲɨjikel-a
   he kaltam-OBJ hawa-OBJ 3SG.SUB-show-PST
   ‘He showed Kaltam Hawa.’
   b. ti **hawa-ʊ** **kaltam-ko** ti-ɲɨjikel-a
   he hawa-OBJ kaltam-OBJ 3SG.SUB-show-PST
   ‘He showed Kaltam Hawa.’

When the consonent-ending **Kaltam** was the direct object, the alternate object marker was either -wo or -bo.

(14) a. ti **hawa-ko** **kaltam-wo** ti-ɲɨjikel-a
   he hawa-OBJ kaltam-OBJ 3SG.SUB-show-PST
   ‘He showed Hawa Kaltam.’
   b. ti **hawa-ko** **kaltam-bo** ti-ɲɨjikel-a
   he hawa-OBJ kaltam-OBJ 3SG.SUB-show-PST
‘He showed Hawa Kaltam.’

The [w] segment in -wo is likely identifiable with -o, but this requires further research. Since Kaltam ends in [m], it is possible that the purported -bo is really the comitative/instrumental -mbo (see section 8), and that (14b) is more appropriately glossed ‘He looked at Hawa with Kaltam’. This hypothesis also requires further research, however.

When the internal argument is a pronoun or left unpronounced, the direct object can be marked with -ko, and cannot be marked with -o.

(15)  

a. ti **hawa-ko** a-ni-ĩkkel-a  
   he hawa-OBJ 1SG-INV1-show-PST  
   ‘He showed me Hawa.’  

b. *ti **hawa-u** a-ni-ĩkkel-a  
   he hawa-OBJ 1SG-INV1-show-PST  
   ‘He showed me Hawa.’

The reported functional reason for the change was that if both arguments are marked with -ko, it wouldn’t be possible to know which internal argument bore which theta-role. However, in an example elicited in an earlier session, this didn’t seem to present a problem for a ditransitive with ‘give’.

(16)  

i **hawa-ko adam-ko** u-ŋ-a  
   they Hawa-OBJ Adam-OBJ 3PL.SUB-give-PST  
   ‘They gave Hawa Adam.’

It may be that word order plays a role. That is, perhaps word order is more rigid and deterministic of theta-roles in (16) than in (13-14). However, while I have not investigated word order possibilities with two names as internal arguments, the respective position of pronouns and other nouns appears to be relatively free.

(17)  

a. i nuntu mnta a-mbi-j-a  
   they food us 1SG-INV2-give-PST  
   ‘They gave us food.’

b. i mnta nuntu a-mbi-j-a  
   they us food 1SG-INV2-give-PST  
   ‘They gave us food.’
Another possibility is that (16) is disambiguated by context, such that either one argument is most natural interpreted as the theme, or that it does not matter which argument is the them since the ‘marriage’ reading of give with humans could be reciprocal. This explanation would mean that the morphology really is acting directly to disambiguate the expression, which would be a surprising result, since usually the disambiguating properties of morphology play a more indirect role. Moreover, there are many examples in this paper and others where Masarak tolerates an amount of thematic ambiguity comparable to the present case (see e.g. ex. 58 below). Thus, the interaction of word order, ambiguity, and case-marking of proper names and other R-expressions requires future reasearch.

2 Agreement – Morphology

2.1 Overview

In (18), I present a generalized subject/object agreement paradigm for Masarak. We see that when the object is 3rd person, agreement varies only with the subject and the object has no effect on its form. When the object is 1st or 2nd person, however, agreement is with the object, and the agreement prefix co-occurs with -mb--nd-; the choice between these two is sensitive to the phi-features (i.e. person/number features) of the subject, as will be discussed in detail.

(18)

<table>
<thead>
<tr>
<th>Subject</th>
<th>1SG</th>
<th>1PL</th>
<th>2SG</th>
<th>2PL</th>
<th>3SG</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1SG</td>
<td></td>
<td></td>
<td>a-nd-</td>
<td>a-mb-</td>
<td>a-nd-</td>
<td>a-mb-</td>
</tr>
<tr>
<td>1PL</td>
<td></td>
<td></td>
<td>a-mb-</td>
<td>a-mb-</td>
<td>a-mb-</td>
<td>a-mb-</td>
</tr>
<tr>
<td>2SG</td>
<td>Ø-mb-</td>
<td>Ø-mb-</td>
<td>Ø-nd-</td>
<td>Ø-mb-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2PL</td>
<td>ki-mb-</td>
<td>ki-mb-</td>
<td>ki-nd-</td>
<td>ki-mb-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3SG</td>
<td>a-</td>
<td>mi-</td>
<td>Ø-</td>
<td>ki-</td>
<td>ti-</td>
<td>i-</td>
</tr>
<tr>
<td>3PL</td>
<td>a-</td>
<td>mi-</td>
<td>Ø-</td>
<td>ki-</td>
<td>ti-</td>
<td>i-</td>
</tr>
</tbody>
</table>

Examples of object agreement are shown in (19). We see in (19a-b) that if the object is 1st person, the a- prefix is used, no matter whether the subject is 3rd person (19a) or 2nd person (19b).
(19c), we see that $\emptyset$- is used with a 2nd person object.

(19) **Object Agreement**
   a. $\text{ti amboro a-ndo-ŋop-e}$
      $\text{he me} \quad 1\text{-INV}1\text{-love-PRS}$
      ‘He loves me.’
   b. $\text{maŋ amboro a-ndo-ŋop-e}$
      $\text{he me} \quad 1\text{-INV}1\text{-love-PRS}$
      ‘You love me.’
   c. $\text{ti mboro $\emptyset$ndo-ŋop-e}$
      $\text{he you} \quad 2\text{SG-INVI}1\text{-love-PRS}$
      ‘He loves you.’

Momentarily ignoring the -mb/-nd- alternation, consider the other agreeing forms. In (20-21), I show the object/subject agreement markers. Notice that the 1st person object prefix makes no number distinction, unlike 2nd person object prefixes, and unlike all subject agreement prefixes.

(20) **Object Agreement** – No number distinctions in the 1st Person

<table>
<thead>
<tr>
<th></th>
<th>Sg</th>
<th>Pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>$\emptyset$-</td>
<td>ki-</td>
</tr>
</tbody>
</table>

(21) **Subject Agreement** – Number distinctions in all persons

<table>
<thead>
<tr>
<th></th>
<th>Sg</th>
<th>Pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a-</td>
<td>mi-</td>
</tr>
<tr>
<td>2</td>
<td>$\emptyset$-</td>
<td>ki-</td>
</tr>
</tbody>
</table>

Supposing that we decompose “person” into binary features for **AUTHOR** and **PARTICIPANT**, the latter meaning “participant in the speech event” and the former referring to the speaker, the generalization about Masarak object agreement can be stated succinctly as in (23).

(22) **Person**
   a. $[+\text{PARTICIPANT}, +\text{AUTHOR}] = 1\text{st}$
   b. $[+\text{PARTICIPANT}, -\text{AUTHOR}] = 2\text{nd}$
   c. $[-\text{PARTICIPANT}, -\text{AUTHOR}] = 3\text{rd}$
(23) **Masarak object agreement generalization:** \([+\text{PARTICIPANT}]\) objects show agreement, \([-\text{PARTICIPANT}]\) objects do not.

Turning to the \(-mb-/nd-\) alternation, Siewierska (2008)\(^{10}\) has used the term **inverse** morphology to describe similar morphemes in languages such as Nocte. In the following example, the suffix \(-ang\) marks 1st person singular in both (a) and (b). However, in (24a), this is the ergative subject, and in (24b), it is the accusative object. However, when \(-ang\) marks the object, an additional \(-h-\) appears.

(24) **Nocte**

a. nga-ma ate he(i)tho-ang
   I-ERG him.ACC teach-1SG
   ‘I will teach him.’

b. ate-ma nga-nang he(i)tho-\(h\)-ang
   he-ERG me.ACC teach-INV-1SG
   ‘He will teach me.’

The function of inverse morphology, under this understanding, is to mark that something other than the subject is controlling agreement. Some languages also have ‘direct’ morphology to mark that the subject controls agreement. Since the \(-mb-/nd-\) forms seem to be doing the same here, namely, identifying the object as the controller of agreement, I will label \(-mb-/nd-\) forms in agreement complexes as inverse as well. Furthermore, I will gloss them in the following way:

(25) a. \(-nd- = \text{INV1} = \text{‘singular (non-author) inverse’}\)
    b. \(-mb- = \text{INV2} = \text{‘plural/author inverse’}\)

The numbers ‘1’ and ‘2’ are meant to be a pneumonic for ‘singular’ and ‘plural’, respectively, though the labels are not strictly speaking accurate, and I turn presently to a more precise account of the features these morphemes realize.

Regarding the features which govern this alternation, the following generalization may be observed.

(26) **1st person objects**

a. **Agreement does not** show a distinction between singular and plural: \(a\)- is used for both.
b. **Inverse** morphology is sensitive to the distinction between singular and plural; if either the subject or the object is plural, -mb- is used.

(27) 2nd person objects
a. Agreement does show a distinction between singular Ø- and plural ki-.
b. **Inverse** morphology is not sensitive to the plurality of the object: the form is the same whether the object is singular or plural.

My proposal for the featural properties of the -mb/-nd- alternation is as follows:

(28) The -mb/-nd- alternation

\[
\begin{array}{c}
\text{[nd]} / [-\text{AUTHOR, } -\text{PLURAL}] \\
\text{[mb]} / \text{elsewhere}
\end{array}
\]

That is, if there are any [+PLURAL] or [+AUTHOR] features which have not been realized by some other morpheme, then -mb- is used.

I now provide some illustrations of this. Consider the case where there is a 1st person object, as in (29).

(29) Agreement

\[
\begin{array}{c}
\text{Agreement} \\
\text{object} \quad \text{subject} \\
[1] \quad [3] \\
\text{a-} \quad \text{nd-}
\end{array}
\]

Since a- does not vary for number, it plausible to assume it only realizes the feature [+AUTHOR] (or in the schemata here, “[1]”). Since the number feature is still available, it can have an effect on the choice between -mb/-nd-. If the object is [+PLURAL], -nd- cannot be used, according to (28).

However, when the object is 2nd person, the agreement prefix realizes both person and number, so -mb/-nd- is insensitive to object number.

(30) Agreement

\[
\begin{array}{c}
\text{Agreement} \\
\text{object} \quad \text{subject} \\
\text{Ø} \quad \text{nd-}
\end{array}
\]

\[
\begin{array}{c}
\text{Agreement} \\
\text{object} \quad \text{subject} \\
\text{ki-} \quad \text{nd-}
\end{array}
\]
It thus appears that when the 2nd person prefixes realize these features, the features become unable to have an effect on the \(-mb-/nd-\) alternation.

When the object is [-PARTICIPANT], subject agreement alone is realized. No features of the object have an effect on the form of subject agreement.

\[
\begin{array}{c}
(31) & \text{Agreement} & \text{Agreement} \\
\text{object} & \text{subject} & \text{object} & \text{subject} \\
[3\text{SG}] & [3\text{SG}] & [3\text{SG}] & [2\text{PL}] \\
\text{ti-} & \text{a-kal-a} & \text{kl-} & \text{a-kal-a} \\
\end{array}
\]

2.2 Additional Discussion

Reflexive objects do not trigger object agreement. The prefixes used when the object is reflexive are the same as those used when the object is 3rd person. This is shown for 1st person and 2nd person subjects below.

\[
(32) \quad \text{1SG Subject} \\
\begin{array}{c}
a. \quad \text{ama ndu-gi-mbe a-kal-a} \\
I \text{body-DEM-1SG.POSS 1SG.SUB-see-PST} \\
\text{‘I saw myself.’} \\
b. \quad \text{ama mboro Ø-mbi-kel-a} \\
I \text{you 2SG-INV2-see-PST} \\
\text{‘I saw you.’}
\end{array}
\]

\[
(33) \quad \text{2SG Subject} \\
\begin{array}{c}
a. \quad \text{maŋ ndu-gi-na-k ðji-kel-a} \\
\text{you body-DEM-2SG.POSS-OBJ 2SG.SUB-see-PST} \\
\text{‘You saw yourself.’} \\
b. \quad \text{maŋ amboro a-ndi-kel-a} \\
\text{you me 1-INV1-see-PST} \\
\text{‘You saw me.’}
\end{array}
\]

Note that as in many languages, reflexives are expressed using the word for ‘body’.

The following examples show a systematic alternation of object person along with the agreement forms they trigger, consistent with the paradigm given in (18). The exception is that ‘see’ uses the ðji- allomorph for 2nd person singular subject agreement (example 36a).
3 Agreement – Ditransitives

3.1 Overview

The main issue I would like to discuss here involves agreement in ditransitives, specifically with regard to the asymmetry between indirect objects (IOs) and direct objects (DOs) as agreement controllers. I have not systematically investigated the word order between the two internal arguments
of a ditransitive, nor the conditions on null arguments. Often, the pronoun which is indexed by object agreement may be (or even preferably is) omitted, and the order between two overt internal arguments seems to be rather free. There do seem to be preferred orders, but I have not investigated what triggers one order over another. Other than this, the basic facts are as follows:

(37) Agreement in ditransitives
   a. Only one object may trigger object agreement.12
   b. With verbs like ‘give’, as well as with causatives like ‘feed’, the indirect object may trigger agreement.13
   c. Benefactive indirect objects do not trigger agreement, regardless of their morphology.

The examples in (38-39) illustrate the difference between benefactive IOs and recipient IOs. In (38), the agreement changes with the features of the recipient, while in (39), the benefactive does not affect the agreement; agreement is with the 3rd person singular subject.

(38) Recipient indirect objects trigger agreement
   a. ti: ngururu amboro a-ndi-j-a
      3SG food me 1-INV 1-give-PST
      ‘He gave food to me.’
   b. ti: ngururu mnta a-ndi-j-a
      3SG food us 1-INV 2-give-PST
      ‘He gave food to us.’

(39) Benefactive indirect objects do not trigger agreement
   a. ti: mada amboro to-ra-na
      he alcohol me 3SG.SUB-buy-PST
      ‘He bought alcohol for me.’
   b. ti: mnta mada to-ra-na
      he us alcohol 3SG.SUB-buy-PST
      ‘He bought alcohol for us.’

I will return to benefactives in section 6, but for now it suffices to say that no benefactive argument I have come across triggers agreement or has any effect on agreement morphology.

   For ‘give’-type ditransitives, the choice of which argument will trigger agreement, the IO or DO, follows a hierarchy of structural position which is sensitive to person:

(40) Argument Agreement: INDIRECT OBJECT > DIRECT OBJECT > SUBJECT

11
12
13
That is, if the IO is [+PARTICIPANT], agreement is with the IO. (Note that in the following examples, ‘give’ is most naturally understood with reference to marriage.)

(41) Agreement with [+PARTICIPANT] indirect object
   a.  \( \text{ti: mboro amboro a-ndi-j-a} \)
       \( \text{he you me 1-INV1-give-PST} \)
       ‘He gave you to me.’
   b.  \( \text{ti: amboro mboro o-ndi-j-a} \)
       \( \text{he me you 2SG-INV1-give-PST} \)
       ‘He gave me to you.’

Note that in these examples, both the IO and the DO are [+PARTICIPANT], so in principle, either could control agreement. However, we do not see two sets of agreement affixes or some special set which is sensitive to both arguments. Instead, what we see is that whenever the IO is [+PARTICIPANT], the featural properties of the DO have no effect on agreement. This will be shown more comprehensively in section 3.2.

This is not to say that the DO cannot trigger agreement in ditransitives. If the IO is [−PARTICIPANT] (i.e. 3rd person), then the DO can trigger agreement—only if the DO is itself [+PARTICIPANT].

(42) Agreement with [+PARTICIPANT] direct object
   a.  \( \text{ti: mboro tiro o-ndi-j-a} \)
       \( \text{3SG you her 2SG-INV1-give-PST} \)
       ‘He gave you to her.’
   b.  \( \text{ti: amboro tiro a-ndi-j-a} \)
       \( \text{3SG me her 1-INV1-give-PST} \)
       ‘He gave me to her.’

In these examples, the IO (recipient) is 3rd person, and so it cannot trigger agreement. However, the DO is not 3rd person, so here, unlike in (41), the DO does trigger agreement. Moreover, notice that the agreement morphemes are identical in each case; agreement with a 2nd person object yields 2nd person object agreement, regardless of whether it is a DO or IO (compare 41b and 42a), and the same goes for 1st person (compare 41a and 42b).
If neither the IO nor the DO are [+PARTICIPANT], then agreement is triggered by the subject. Some examples of this are given in (43).

(43) Agreement with subject
a. ki: tiro puquru ku-ŋ-a
   you.PL him food  2PL.SUB-give-PST
   ‘You.PL gave him food.’
b. i: hawa-ko tiro u-ŋ-a
   they Hawa-OBJ him 3PL.SUB-give-PST
   ‘They have Hawa to him.’
c. ti: mtau su: tu-ŋ-a
   he them goat 3SG.SUB-give-PST
   ‘He gave a goat to them.’

Subject agreement, unlike object agreement, is not sensitive to [+PARTICIPANT]—all persons and numbers have distinct agreement prefixes.14

The agreement properties of Masarak are summarized visually in the following ‘agreement decision tree’.

\[
\text{(44) INDIRECT OBJECT} \\
| \text{Agree} | \text{DIRECT OBJECT} \\
| \text{Agree} | \text{SUBJECT} \\
| \text{Agree} |
\]

3.2 Additional Discussion

As discussed in the previous section, when the IO triggers agreement, the features of the DO have no effect on the agreement morphology. In the following examples, I boldface the finite verb complex and the argument which does not affect agreement.

(45) 1SG indirect object
a. ti mtau amboro a-ndi-j-a
   he them me 1-INVL1-give-PST
‘He gave them to me.’

b. ti kmta mboro a-ndi-j-a
   he you.PL me 1-INV1-give-PST
   ‘He gave you.PL to me.’

c. ti mboro mboro a-ndi-j-a
   he you me 1-INV1-give-PST
   ‘He gave you to me.’

(46) 2SG object

a. i mtau mboro Ø-mbi-j-a
   they them you 2SG-INV2-give-PST
   ‘They gave them to you.’

b. i mboro tiro Ø-mbi-j-a
   they you him 2SG-INV2-give-PST
   ‘They gave him to you.’

Similarly, when the DO triggers agreement, the number features of the IO have no effect on agreement morphology.

(47) 1SG direct object

a. ti amboro tiro a-ndi-j-a
   he me her 1-INV1-give-PST
   ‘He gave me to her.’

b. ti amboro mta a-ndi-j-a
   he me them 1-INV1-give-PST
   ‘He gave me to them.’

However, as in the monotransitive examples above, the person/number features of the subject can affect the form. Thus, if the subject is plural and the object is 1st person, the inverse form -mbi- is used instead of -ndi-. (Here I boldface the subject which has an effect on inverse morphology, along with the finite verb complex.)

(48) 3SG/PL subject – 1SG object

a. ti amboro tiro a-ndi-j-a
   he me her 1-INV1-give-PST
   ‘He gave me to her.’

b. i tiro amboro a-mbi-j-a
   they her me 1-INV2-give-PST
   ‘They gave me to her.’
Similarly, when the object is 2nd person, and the subject is either 1st person or plural, the inverse form is -mbi- rather than -ndi-.

(49) 3SG/PL, 1SG subject – 2SG object
   a. ti tiro mboro Ø-ndi-j-a
      he her you 2SG-INV1-give-PST
      ‘He gave you to her.’
   b. ama tiro mboro Ø-mbi-j-a
      I  her you 2SG-INV2-give-PST
      ‘I gave you to her.’
   c. i tiro mboro Ø-mbi-j-a
      they 3SG you 2SG-INV2-give-PST
      ‘They gave you to her.’

Note that this is no different from the monotransitive cases. In general, either the IO or DO will trigger agreement. When it does, however, agreement works the same as in monotransitives—the inverse form is sensitive to features of the subject and object. However, what has been shown in this section is that the non-agreeing object has no effect on agreement morphology. From the perspective of agreement morphology, ditransitives are treated like transitives, modulo the difference that in ditransitives, it must be determined which of the two objects act as the agreeing object. As shown in the previous section, this follows a strict hierarchy of IO > DO, where the IO triggers agreement even when both the IO and the DO are [+PARTICIPANT].

3.3 Towards an analysis of ditransitive agreement

McGinnis (2008) discusses what she calles dependent agreement. She distinguishes between two kinds of dependent agreement systems: position-based dependent agreement, and feature-based dependent agreement. She describes the difference as follows:

In position-based dependent agreement, the choice of which argument triggers agreement depends primarily on the relative syntactic positions of the arguments. […] In feature-based dependent agreement, by contrast, the choice of which argument triggers
agreement depends primarily on the arguments’ relative specifications for φ-features, such as animacy, person, or number. (McGinnis, 2008, 155-156)

She illustrates position-based dependent agreement with Yucatec Mayan. In Yucatec Mayan, objects preferentially trigger suffixal agreement on the verb. In intransitives, where there is no object, suffixal agreement is triggered by the subject.\textsuperscript{15} Feature-based dependent agreement is illustrated by Algonquian, where any 2nd person argument, subject or object, will trigger agreement if present. If there is no 2nd person argument, then any 1st person argument will trigger agreement. If there are no 1st or 2nd person arguments, then a 3rd person (proximate) argument may trigger agreement.

The Masarak agreement system is interesting in that it exhibits both feature-based and position-based dependent agreement. It is position based in that the object has the first ‘chance’ at controlling agreement. It is feature-based in that 1st/2nd person arguments agree preferentially over 3rd person arguments. If we said that it was only feature based in that 1st/2nd is preferred over 3rd, we wouldn’t explain (a) the fact that the object position takes precedence over the subject position, or (b) the fact that the indirect object position takes precedence over the direct object position. It is not just a matter of features—the position the features come from matters. Similarly, if we said that it was only position based, we would have to say in addition that the feature \([\pm \text{PARTICIPANT}]\) mattered, since objects can only agree if they are \([+\text{PARTICIPANT}]\). Subject agreement, on the other hand, is not so constrained.

I would like to propose an analysis for two aspects of the Masarak agreement system: the fact that IOs trigger agreement preferentially over DOs, and the fact that benefactives never trigger agreement. I would like to suggest that the latter difference is related to a structural difference between benefactive IOs (with verbs like ‘give’) and recipient IOs (with verbs like ‘buy’). Pylkkänen (2002) discusses the difference between what she calls “high applicatives” and “low applicatives.” A low applicative expresses a relation between two entities, such that one entity comes to possess the other. ‘Give’ is a prototypical example. An event of giving is necessarily an event where one entity comes to possess another entity. If there is no ‘caused possession’, there is no ‘giving’ event
(see Rappaport Hovav and Levin (2008) for extensive discussion of caused possession with ‘give’).

This is not the case with an event of ‘buying for someone’. When one buys something for someone, the event of buying comes first, and that whole event comes to benefit the benefactor separately. Whereas buying can occur without a benefactor, giving cannot occur without a recipient.

The structural difference between a benefactor and a “pure” recipient relates to where the Applicative head (Appl) occurs. With “pure” recipients, the Appl head takes a DP complement (the theme) and another DP in its specifier (the recipient). This expresses the relation between the two as one of possession. This ApplP serves as the complement to ‘give’ (or verbs like it), as shown in (50).

(50) Low Applicatives — “Pure” Recipients

In benefactive constructions, on the other hand, Appl takes a vP complement. This expresses that the entire event denoted by vP serves to benefit the DP in SpecApplP. This is shown in (51).
Given these structures, my proposal for object agreement is that little v agrees with the closest DP it c-commands, as long as that DP is [+PARTICIPANT]. There will be no agreement with the benefactive argument since v does not c-command the benefactive. Subject agreement, on the other hand, is between Voice and the subject DP in its specifier. This is summarized in (52).

(52)  a. **Object agreement**: v agrees with the closest DP in its c-command domain which is [+PARTICIPANT].

b. **Subject agreement**: Voice agrees with the DP in SpecVoiceP.

Consider how this works for a few (hypothetical) examples. If the indirect object is 2nd person, it will be within the c-command domain of v, and it can thus control agreement on v.
With ‘buy’, on the other hand, the indirect object, whether 2nd person or not, is not in the c-command domain of v, as shown in (54).\textsuperscript{16} If v were to agree with anything, it would be with the direct object. Since the direct object is 3rd person, however, no agreement with the object is established. (Here I represent “attempted” agreement relations with dotted lines.)

(54) High Applicative — “I bought you a book”

Returning to low applicatives, notice that the indirect object is closer to v than the direct object is.\textsuperscript{17} Accordingly, v agrees with the indirect object rather than the direct object, since v agrees with the closest constituent bearing the relevant features.
(55) Low Applicative — “He gave me to you.”

However, if $v$ cannot agree with the indirect object because it is 3rd person, then it can agree with the object which is farther away in its c-command domain—the direct object.

(56) Low Applicative — “He gave you to her.”

Since the locus of object agreement is the same in both cases (i.e. little $v$), we correctly account for the fact that the morphological forms are the same whether the direct object or the indirect object trigger agreement.$^{18}$
4 Causatives

4.1 -n(d)- causatives

In this section, I discuss some marked non-analytic causative alternations. In some cases, the causative involves an -n- or -nd-. This prefix occurs at the left edge of the stem, and is preceded by agreement markers.

(57) Marked Causative
   a. si: teri ti-pa-na
      goat grass 3SG-eat-PST
      ‘The big goat ate grass.’
   b. kima-gi teri lero ti-ndi-pa-na
      child-this grass donkey 3SG.SUB-CAUS-eat-PST
      ‘The child fed grass to the donkey.’

This kind of causative for ‘feed’ can only be used to express direct causation, such as putting the grass into the donkey’s mouth. Simply giving food to the animal for it to eat would be expressed using ‘give’ rather than the ‘eat’ causative.

As mentioned earlier, the causee can trigger object agreement in causatives. Word order between the two objects is relatively free as well. Thus, the example in (58b) is ambiguous between the lion getting a meal and the lion being a meal.

(58) Object Agreement with Causee
   a. ti amboro mosko a-nde-ndi-pa-na
      he me banana 1-INVL-CAUS-eat-PST
      ‘He fed me the banana.’
   b. ti amaro amboro a-nde-ndi-pa-na
      he lion me 1-INVL-CAUS-eat-PST
      ‘He fed me to the lion. / He fed the lion (meat) to me.’ (Ambiguous)

Another example of this alternation involves ‘learn/teach’.

(59) a. ama masarak a-usiŋ-a
     I Masarak 1SG.SUB-learn-PST
     ‘I learned Masarak. / I came to know Masarak.’
b. *daød amboro masarak a-nda-n-osin-a*  
Daowd me Masarak 1SG-INV1-CAUS-learn-PST  
‘Daowd taught me Masarak.’

c. *adam masarak t-osin-a*  
adam Masarak 1SG.SUB-learn-PST  
‘He learned Masarak. / He came to know Masarak.’

d. *ama tiro masarak a-n-osin-a*  
I him Masarak 1SG.SUB-CAUS-learn-PST  
‘I taught him Masarak.’

Daowd reports that another natural word order puts the learner first.

(60) *amboro daød masarak a-nda-nos-iN-a*  
me Daowd Masarak 1SG-INV1-CAUS-learn-PST  
‘Daowd taught me Masarak.’

Edward Chu (p.c.) points out to me another case where there is potentially a causative -nd-. First, consider the following examples of the verb ‘catch’, which is used for expression of fish-catching.

(61) a. *ti: kuñu t-ibE-na*  
he fish 3SG-catch-PST  
‘He caught the fish.’

b. *mai kuñu g-ibE-na*  
you fish 2SG-catch-PST  
‘You caught the fish.’

It turns out that, much like English, this same verb is used to describe a house ‘catching fire’ (though it is not clear from these examples whether ‘fire’ is the subject or object). This is shown in (62a). However, if -nd- is added to to the stem, an extra argument can be used to mean ‘set the house on fire’ (62b). However, -nd- appears to alternate freely with -n- (62c).

(62) a. *wasi taño t-ibe-na*  
fire house 3SG-catch-PST  
‘The house burned. (The house caught fire.)’

b. *ti: taño wasu ti-nd-ibe-na*  
he house fire 3SG-CAUS-catch-PST  
‘He burned the house. (He made the house catch fire.)’
c.  ti: taŋo wasu ti-n-ibe-na
    he house fire  3SG-CAUS-catch-PST
    ‘He burned the house. (He made the house catch fire.)’

Thus, it is possible that the -n- in (59) was also a causative morpheme of the same type. In (63), I present a few pairs which show this sort of alternation.

(63) Some causative pairs
    -osiŋ-  ‘learn’    -n-osiŋ-  ‘teach’
    -ibe-  ‘catch’    -n-ibe-  ‘cause to catch’
    -ora-  ‘fear’    -n-ora-  ‘frighten’
    -ije-  ‘be lost’    -nd-ije-  ‘lose’
    -ar-  ‘come’    -n-ar-  ‘bring’
    -ŋiŋel-  ‘wake up (intr.)’    -n-ŋiŋel-  ‘wake up (tr.)’

4.2 Unmarked causatives

I have only done some preliminary work on unmarked causatives, but here I will describe two kinds of ‘unmarked’ causative alternations I have encountered. First, some verbs allow a causative and an anticausative form with only a vowel change between them. An examples involves ‘break’.

(64) a.  kima-ta buta-gi te-rmi-na
    child-POSS stick-DEF 3SG.SUB-break-PST
    ‘The child’s stick broke.’

b.  hawa buta kima-ta-k  ta-rmi-na
    Hawa stick child-POSS-DEF 3SG.SUB-break-PST
    ‘Hawa broke the child’s stick.’

c.  hawa buta-k  ta-rmi-na
    Hawa stick-OBJ 3SG.SUB-break-PST
    ‘Hawa broke the stick.’

Here, the anticausative form involves the agreement marker with [ɛ] and the causative [a].

Second, there are lexical causatives where the causative and anticausative forms are unrelated lexical verbs. an example of this is ‘drop’ versus ‘fall’. The word for ‘drop’ can also mean ‘throw’. Note also that these examples show a locative marker -m (see section 5).23

(65) a.  buta gani-m  tu-sur-a
    stick ground-LOC 3SG.SUB-fall-PST
    ‘The stick fell on the ground.’
b. ama buto gani-m Ø-artf-a
   I stick ground-LOC 1SG.SUB-drop-PST
   ‘I dropped/threw the stick on the ground.’

c. ti: buto gani-m t-artf-a
   he stick ground-LOC 3SG.SUB-drop-PST
   ‘He dropped the stick on the ground.’

d. i: buto gani-m w-artf-a
   they stick ground-LOC 3PL.SUB-drop-PST
   ‘They dropped the stick on the ground.’

4.3 Analytic Causatives

Wadley (2010a) reports the following causatives. One set uses a form with the ‘do/make’. This appears related to the form used for unincorporated unergatives (see section 1.2).

(66) Causatives with ‘do/make’
   a. ama tiro rub:a a-n-a
      I 3SG.OBJ raise 1SG.SUBJ-aux.do/make-PST
      ‘I raised him.’
   b. ama mborø rub:a Ø-mb-ɛ:n-a
      you.SG.OBJ raise 2SG-INV2-make/do-PST
      ‘I raised you.’
   c. ama mborø ka:ŋ kad:u Ø-mb-ɛ:n-a
      you.SG.OBJ person big 2SG-INV2-make/do-PST
      ‘I raised you.’
   d. ama mborø amaro Ø-mb-ɛ:n-a
      you lion 2SG-INV2-make/do-PST
      ‘I made you be a lion / I turned you into a lion.’

A second kind of analytic causative apparently has the stem form -u:s-. Here there are examples where the causee appears to be the subject of a predicate adjective. I do not know if this is possible with the ‘do/make’ forms. Note that (66c) contrasts with (67b) in that the latter uses only the predicate adjective ka:du ‘big’ whereas the former uses a full DP ka:ŋ kad:u ‘big person’.

(67) Causatives with -u:s-
   a. i. ama mugula jɛ
      I fat COP
      ‘I am fat.’
ii. nùguru amerika-ta-k mugula a-ngu:s-a
   food america-poss-def fat 1-inv1-make.be-pst
   ‘American food made me fat.’

b. ti amboro ka:du a-ngu:s-a
   he me big 1-inv1-make.be-pst
   ‘He made me big / He raised me.’

However, this form can in addition express a causee which is the subject of a predicate noun.

(68) ama mbororo amaro Ø-mbu:s-a
     I you.sg.obj lion 2sg-inv2-make.be-pst
     ‘I made you be a lion / I turned you into a lion.’

5 Sources & Locatives

5.1 Overview

One type of source marker is mana(i).

(69) Sources with mana(i)
   a. ñamu ði manai
cream milk from
   ‘Cream is from milk.’
   b. ñamu ði mana
cream milk from
   ‘Cream is from milk.’

More typically, sources are marked with malak.

(70) Sources with malak
   a. ti nàguru mnta-malak ti-ni:ya-na
      he food us-from 3sg.sub-steal-pst
      ‘He stole the food from us.’
   b. ti nàguru nu ñërzi tnda-malak ti-ni:ya-na
      he food New Jersey 3sg-from 3sg.sub-steal-pst
      ‘He stole food from New Jersey.’
   c. ama ler-i-malak a-dar-a
      I donkey-from 1sg.sub-fell-pst
      ‘I fell from the donkey.’
d. i: mada am(a) anda-malak ø-ro-na
   they alcohol I 1SG-from 3PL.SUB-buy-PST
   ‘They bought alcohol from me.’

malak is also used in some cases in a source/causative alternation.

(71) **Source/Causative alternation with malak**

a. maŋ amboro-malak Ø-ndesir-na
   you me-from 2SG.SUB-anger-PST
   ‘You got angry because of me.’

b. ama mboro Ø-mba-ndesir-na
   I you 2SG-INV2-anger-PST
   ‘I angered you.’

When pronouns are used, there are two options. Either the object form is used, as in (71a) above, or else the subject form is used, and agreement forms attach to the postposition. An example of this alternation is shown below.

(72)

a. nguru am(a) anda-malak i-niŋa-na
   food I me-from 3PL.SUB-steal-PST
   ‘Food was stolen from me.’

b. nguru amboro-malak i-niŋa-na
   food me-from 3PL.SUB-steal-PST
   ‘Food was stolen from me.’

(Note here that the function of the passive in English is often expressed by using an impersonal construction with a null 3rd person plural subject, evidenced by agreement; this is apparently similar to impersonal uses of *they* in English, such as “They say some comets have a very long orbit.”) I will call the first case the “Objective without Postpositional Agreement Construction” (OPAC), and the second the “Nominative with Postpositional Agreement Construction” (NPAC).

(73) **Agreement Forms with malak**

a. ti: nguru mi: mnda-malak ti-niŋa-na
   he food we us-from 3SG.SUB-steal-PST
   ‘He stole the food from us.’

b. ti: nguru ti tnda-malak ti-niŋa-na
   she food he him-from 3SG.SUB-steal-PST
   ‘She stole the food from him.’
c. ama пуґуру маъ дўйа-малак a-nижана
   I food you you-from 1SG.SUB-stole
   ‘I stole the food from you.’

It turns out that malak is not the only postposition-like element which alternates between the NPAC and OPAC. Both kanaj ‘toward’ and the locative marker -m do the same.

(74) Agreement Forms with kanaj ‘toward’ and -m ‘locative’
   a. ti маъ дўйа-канаъ t-arф-a
      he you 2SG-toward 3SG-throw-PST
      ‘He threw something toward you.’
   b. маъ am(a) анда-m sa: 1-й-na
      you 1SG-LOC water 2SG.SUB-pour-PST
      ‘You spilled water on me.’
   c. i. ti abuґoron-ko am(a) анда-m t-ондo-я a
       he bug-OBJ 1SG-LOC 3SG.SUB-put-PST
       ‘He put the bug on me.’
      ii. ti abuґoron-ko анборo-m t-ондo-я a
          he bug-OBJ me-LOC 3SG.SUB-put-PST
          ‘He put the bug on me.’

The table in (75) shows a paradigm of forms for each marker.

(75)

<table>
<thead>
<tr>
<th></th>
<th>From</th>
<th>Toward</th>
<th>At/On/Locative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SG</td>
<td>1 am-анда-малак</td>
<td>am-анда-канаъ</td>
<td>am-анда-m</td>
</tr>
<tr>
<td></td>
<td>2 маъ-дўйа-малак</td>
<td>маъ-дўйа-канаъ</td>
<td>маъ-дўйа-m</td>
</tr>
<tr>
<td></td>
<td>3 ти-тънда-малак</td>
<td>ти-тънда-канаъ</td>
<td>ти-тънда-m</td>
</tr>
<tr>
<td>PL</td>
<td>1 ми-мънда-малак</td>
<td>ми-мънда-канаъ</td>
<td>ми-мънда-m</td>
</tr>
<tr>
<td></td>
<td>2 ки-кънда-малак</td>
<td>ки-кънда-канаъ</td>
<td>ки-кънда-m</td>
</tr>
<tr>
<td></td>
<td>3 инта-малак</td>
<td>инта-канаъ</td>
<td>инта-m</td>
</tr>
<tr>
<td>SG</td>
<td>1 анборo-малак</td>
<td>анборo-канаъ</td>
<td>анборo-m</td>
</tr>
<tr>
<td></td>
<td>2 мборo-малак</td>
<td>мборo-канаъ</td>
<td>мборo-m</td>
</tr>
<tr>
<td></td>
<td>3 тиро-малак</td>
<td>тиро-канаъ</td>
<td>тиро-m</td>
</tr>
<tr>
<td>PL</td>
<td>1 мънтa-малак</td>
<td>мънтa-канаъ</td>
<td>мънтa-m</td>
</tr>
<tr>
<td></td>
<td>2 кънта-малак</td>
<td>кънта-канаъ</td>
<td>кънта-m</td>
</tr>
<tr>
<td></td>
<td>3 инта-малак</td>
<td>инта-канаъ</td>
<td>инта-m</td>
</tr>
</tbody>
</table>

At this point, it is not known how many more postpositions do this, if any.
5.2 Further Discussion

The forms which mark agreement with postpositions are almost identical to the finite forms of the verb ‘stay’, except that the final vowel seems to be different. Since ‘stay’ is highly grammaticized (it marks aspect, for example; see Wadley (2010b)), and since the postpositional forms which show agreement are generally locative in nature, one possibility is that there is something like a relative clause or biclausal structure when subjective pronouns are used with ‘agreement’.

That the NPAC is a biclausal structure is evidenced by Condition B effects. In the following examples, if the OPAC is chosen, the objective pronoun cannot be coreferent with the subject (76a), suggesting that it is in the same clause and thus induces a Condition B violation. If, however, the NPAC is used, as in (76b), coreference is possible—suggesting conversely that the pronoun is not in the same clause.

(76) a. \( \text{ti}_i \ \text{tiro}_{s/j} \text{-malak t-artf-} \alpha \)
    \( \text{he}_i \ \text{him}_{s/j} \text{-from } \text{3SG.SUB-throw-PST} \)
    ‘Hei threw something away from him\( s/j \).’

    b. \( \text{ti}_i \ \text{tnda}_{s/j} \text{-malak t-artf-} \alpha \)
    \( \text{he}_i \ \text{3SG}_i \text{-from } \text{3SG.SUB-throw-PST} \)
    ‘Hei threw something away from him\( s/j \).’

The postposition -kanay illustrates the same point. The coreferent example might refer to a boomerang or similar device which when thrown comes back toward the thrower.

(77) a. \( \text{ti}_i \ \text{tnda}_{s/j} \text{-kanay t-artf-} \alpha \)
    \( \text{he}_i \ \text{3SG}_i \text{-toward } \text{3SG.SUB-throw-PST} \)
    ‘Hei threw something toward him\( s/j \).’

    b. \( \text{ti}_i \ \text{tiro}_{s/j} \text{-kanay t-artf-} \alpha \)
    \( \text{he}_i \ \text{him}_{s/j} \text{-toward } \text{3SG.SUB-throw-PST} \)
    ‘Hei threw something toward him\( s/j \).’

However, the specifics of a biclausal analysis are unclear. It should be noted that -malak and -m NPACs cannot form propositions of their own—the following are ungrammatical as “complete” utterances.

(78) a. \( \text{am}(\alpha) \text{ando-m} \)
    \( \text{I } \text{1SG-LOC} \)
Therefore, the biclausal analysis question cannot simply be coordination or simple subordination between two clauses. Another possibility is that this is a relative clause structure, with the verb ‘stay’, so that (76b) means something more like ‘He threw something away from where he stays’. However, the relative is hard to find independent evidence for. First, there is no alternation with other unambiguous relative clause forms, such as with -gi, -i, -ηa-i (see Collins (2010) for the forms of Masarak relative clauses). Second, the meaning of ‘stay’ in these constructions would have to be completely bleached, in light of examples like (70b), repeated here.

(79) ti ḫuguru mu ḫerzi tīnda-malak ti-niŋa-na
      he food       New Jersey 3SG-from       3SG.SUB-steal-PST
      ‘He stole food from New Jersey.’

It would not make much sense to understand this as ‘He stole food from where New Jersey stays’ unless ‘stay’ is completely semantically bleached.

However, the agreement analysis of these cases faces problems of its own. As noted above, if the NPAC involves agreement, the forms resemble object agreement insofar as they contain -nd- along with a more transparent person/number marker. If this is the case, however, there are still some important differences. First, the 3rd person occurs with -nd- unlike with verbal objects, where 3rd person does not trigger agreement at all. Second, these forms do not alternate with -mb-, as far as I’ve been able to ascertain. One place where we might expect -mb- is in put-type verbs which take an obligatory small clause where an entity is predicated of a location. The expectation would be that the subject of the small clause, if plural, might trigger -mb-. However, this is not borne out, as shown below.

(80) a. ti abugoron-ta am(a) anda-m t-ondon-a
      he bug-PL I       1SG-LOC 3SG.SUB-put-PST
      ‘He put the bugs on me.’

b. ti abugoron-ko am(a) anda-m t-ondon-a
      he bug-OBJ I       1SG-LOC 3SG.SUB-put-PST
      ‘He put the bug on me.’

c. ti abugoron-ko amboro-m t-ondon-a
      he bug-OBJ me-LOC 3SG.SUB-put-PST
‘He put the bug on me.’

The (80c) example shows that as in other cases with the NPAC, an object pronoun can be substituted for the complex form. Note, though, that changing the plurality of ‘bug’ does not change the agreement form.30

In sum, the problems with the agreement analysis, other than the general cross-linguistic rarity of agreement with postpositions, are that (1) it does not show the same kinds of agreement alternations as transitive examples with object agreement, (2) nominative subject forms themselves suggest something more than agreement, and (3) Condition B effects on non-nominative pronouns suggest a biclausal analysis of agreeing cases, but it is not clear what such an analysis should look like. The problems with the biclausal analysis are that (1) the forms cannot stand on their own, arguing against pure subordination or coordination, and (2) a relative clause analysis seems unlikely or at least very difficult to verify.

6 Benefactives

There are at least three ways of marking benefactives in Marasarak.

(81) Benefactive markers
   a. mba/nda marking
   b. -to suffixing (and related pronominal forms).
   c. Ordinary object forms.

The alternation among these three is quite complicated, and involves a number of subtle semantic distinctions. In this section, I will do my best to present my understanding of the semantic properties of the different forms, but this is an area which requires further research.

6.1 Benefactives 1 – mba/nda

In (82), I present a paradigm of benefactive markers along with pronominals.
As the table shows, *mba* is used for 1st person, and *nda* is used for all other persons.

As shown in (83), however, the pronoun is optional. When it is not used, as in (83a), the sentence is ambiguous for number.

(83) 1st Person Benefactives
   a. *ti mba* mukolo ti-bi-na
      he BEN1 bag 3SG-grab-PST
      ‘He grabbed the bag for me/us.’ (Ambiguous)
   b. *ti amboro-nda* mukolo ti-bi-na
      he me-BEN1 bag 3SG-grab-PST
      ‘He grabbed the bag for me.’
   c. *ti mInta-nda* mukolo ti-bi-na
      he us-BEN1 bag 3SG-grab-PST
      ‘He grabbed the bag for us.’

Non-1st person exhibits the same behavior. When the pronoun is not expressed, the sentence is ambiguous for all non-1st persons, singular and plural.

(84) Non-1st Person Benefactives
   a. *ti nda* mukolo ti-bi-na
      he BEN2/3 bag 3SG-grab-PST
      ‘He grabbed the bag for you.SG/PL/him/her/them.’ (Ambiguous)
   b. *ti mboro-nda* mukolo ti-bi-na
      he you-BEN2/3 bag 3SG-grab-PST
      ‘He grabbed the bag for you.’
   c. *ti tiro-nda* mukolo ti-bi-na
      he her-BEN2/3 bag 3SG-hold-PST
      ‘He grabbed the bag for her.’
   d. *ti kInta-nda* mukolo ti-bi-na
      he you.PL-BEN2/3 bag 3SG-grab-PST
      ‘He grabbed the bag for you.PL.’
   e. *ti mta-nda* mukolo ti-bi-na
      he them-BEN2/3 bag 3SG-grab-PST
      ‘He grabbed the bag for them.’
The benefactive marker seems to attach phonologically to a host, but it need not be adjacent to the pronoun to which it refers. However, it may not appear in any other position in the following sentences.

(85) **Benefactive marker separate from pronoun**

a. \( \text{ti amboro mukolo-mba ti-bi-na} \)
   \( \text{he me bag-BEN1 3SG-grab-PST} \)
   ‘He grabbed the bag for me.’

b. \( \text{ti mboro mukoro-nda ti-bi-na} \)
   \( \text{he you bag-BEN2/3 3SG-grab-PST} \)
   ‘He grabbed the bag for you.’

In fact, when the benefactive argument is contrastively focused with the particle \( de, mba/nda \) must appear separated from it.

(86) a. \( \text{kaltam amboro-de mada-mba to-ro-na} \)
   \( \text{kaltam me-only alcohol-BEN1 3SG.SUB-buy-PST} \)
   ‘Kaltam bought the alcohol for me only.’

b. * \( \text{kaltam amboro-de-mba mada to-ro-na} \)
   \( \text{kaltam me-only-BEN1 alcohol 3SG.SUB-buy-PST} \)

c. * \( \text{kaltam amboro-mba-de mada to-ro-na} \)
   \( \text{kaltam me-BEN1-only alcohol 3SG.SUB-buy-PST} \)

When constrastive focus is without the particle, both positions are possible (87a-a’). However, with contrastive focus, the pronoun must be overt; the benefactive particle \( mba/nda \) may not stand alone in such a case (87a’). The following exchange shows this.

(87) **Context:** Everyone has to take a turn and go to the market to buy alcohol. Hawa makes the claim that she does not have to go, because Kaltam already went for her. Adam disagrees, and believes that Kaltam went for him.

**Hawa:** Kaltam mada-mba to-ro-na
   \( \text{Kaltam alcohol-BEN1 3SG.buy-PST} \)
   ‘Kaltam bought alcohol for me.’

a. **Adam:** lala, kaltam amboro mada-mba to-ro-na
   no, Kaltam me alcohol-BEN1 3SG.SUB-buy-PST
   ‘No, Kaltam bought the alcohol for ME.’

a.’ **Adam:** lala, kaltam amboro-mba mada to-ro-na
   no, Kaltam me-BEN1 alcohol 3SG.SUB-buy-PST
   ‘No, Kaltam bought the alcohol for ME.’
a.” # Adam: lala, kaltam {mba} mada {mba} to-ro-na
      no, Kaltam {BEN1} alcohol {BEN1} 3SG.SUB-buy-PST
      ‘No, Kaltam bought the alcohol for ME.’

We see in (a) and (a’) that mba may appear in either position. However, the pronoun is obligatory; it may not be left out under contrastive focus, no matter where mba is placed. This suggests that mba itself cannot carry contrastive focus. (The brackets indicate possible positions of mba, and the ‘#’ indicates contextual infelicity, since (a’’) is a grammatical sentence.)

In (88), I present some other uses of benefactives. Note especially in (88c), that it can be added as a third argument to a ditransitive.

(88) Other uses of benefactives
    a. ti tiro-nda t-ij-a
       he her-BEN2/3 3SG-die-PST
       ‘He died for her.’
    b. ti ṭuju mba t-efel-a
       he meat BEN1 3SG.SUB-cut-PST
       ‘He cut the meat for me.’
    c. ti ṭujuuru mfgε mba tu-j-a
       he food dog BEN1 3SG-give-PST
       ‘He gave the food to the dog for me.’

The most salient reading of the mba/nda benefactive relates to ability. To take a concrete example, consider (89). Here, the most salient reading is one where he is grabbing the bag so that she does not have to, or because she lacks the ability to grab it. Perhaps it is too heavy, or too far away.

(89) ti tiro-nda mukolo ti-bi-na
    he her-BEN2/3 bag 3SG-hold-PST
    ‘He grabbed the bag for her.’

Similarly, consider (90). Here, the most salient understanding is that he dances so that she does not have to; he dances on her behalf. What is not a very salient reading in this case is that he dances for her enjoyment.

(90) ti nda t-am-i
    he BEN2/3 3SG.SUB-dance-PRS
‘He dances for her.’

The ‘enjoyment’ reading, however, can be brought out by further context. In the following example, it is explicitly stated that she enjoys his dancing, and there the benefactive is not interpreted as ‘on her behalf’.

(91) ti nda t-amin ti-nd-e
     he BEN2/3 3SG.SUB-dance.PFV love.IMPFV 3SG.SUB-stay-PRS
     ‘She enjoys it while he dances for her.’

This suggests that the enjoyment reading is available, but not the most salient one.

Further evidence that this is the case comes from an example with the word for ‘sprout’.

(92) ase nda i-ŋər-a
     sorghum BEN2/3 3PL.SUB-sprout-PST
     ‘The sorghum(s) sprouted for you.’

In this example, the benefactive could not be understood as ‘on your behalf’. Rather, its most salient reading is where the addressee was hoping the sorghum would sprout and it does.

Finally, there is one case where the reading is either malefactive or perhaps more generally “affected”, but again, not the ‘on your behalf’ reading. I will cautiously translate this as ‘on’, in the colloquial English use which means, roughly, “The cup broke and you were affected (negatively) by its breaking.”

(93) bitala-gi nda te-rmi-na
     cup-DEM BEN2/3 3SG.SUB-break-PST
     ‘The cup broke on you.’

Thus, it appears the the mba/nda benefactive markers express affectedness in the general case, where the most salient reading is often the ‘on X’s behalf’ reading. However, future research is needed to determine more precisely the range of possible interpretations with various predicates.

### 6.2 Benefactives 2 – -to and related forms

In (94), I present a possible paradigm of benefactive markers. I say ‘possible’ because I have had a hard time staying within one paradigm and avoiding other benefactive strategies. Thus, I am not
entirely sure that these are all of the same class. My suspicion is that this set of forms is either
a possessive construction with possible benefactive interpretation, or a ‘benefactive’ possessive
construction. They seem to occur mainly where some sort of possession in involved. I present
some examples of the pronoun forms in (95).

(94)  *Possible* paradigm for possessive benefactive markers

<table>
<thead>
<tr>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mbo</td>
<td>məniŋ</td>
</tr>
<tr>
<td>2 no</td>
<td>kiniŋ</td>
</tr>
<tr>
<td>3 to</td>
<td>inįŋ</td>
</tr>
</tbody>
</table>

(95)  a.  manŋ mada mbo Ø-ro-na
       you alcohol me.BEN 2SG.SUB-buy-PST
       ‘You bought one kind of alcohol for me.’
  b.  ama mada no a-ro-na
       I alcohol you.BEN 1SG.SUB-buy-PST
       ‘I bought alcohol for you.’
  c.  ama mada to a-ro-na
       I alcohol him.BEN 1SG.SUB-buy-PST
       ‘I bought alcohol for him.’
  d.  i: mada məniŋ ści-ro-na
       they alcohol us.BEN 3PL.SUB-buy-PST
       ‘They bought alcohol for us.’

When this type of benefactive is used with a non-pronominal DP, it is expressed with a -to suffix.33

Note the ambiguity in (b).

(96)  ama ɲuŋuŋu kaŋgi-to a-na
       I food man-BEN 1SG.SUB-made
       ‘I made food for the man.’
(97)  ama ɲuŋu kaŋgi-to a-ifəl-a
       I meat man-BEN 1SG.SUB-cut-PST
       ‘I cut the meat for the man. / I cut the meat from the man. (i.e. off of the man)’

The following sentence exemplifies the difference between the mba/nda type benefactive
and the possessive -to benefactive. The meat is being bought so that it may come into the pos-
session of the mother, and the subject is doing the buying so that the addressee does not have
to.
(98)  ti  nda-na-to  nda  to-ra-na
he meat  mother-2SG.POSS-BEN  BEN2/3  3SG.SUB-buy-PST
‘He bought meat for your mother for you.’

That these are possessive benefactive forms, rather than ordinary benefactive forms, is suggested by several considerations. First, the possessive benefactive cannot be used in contexts where there is no plausible possessor, such as sentences describing activities like running.

(99) a.  ti  nda  t-orin-a
he  BEN2/3  3SG.SUB-run-PST
‘He ran for you.’
b.  * ti  no  t-orin-a
he  you.BEN  3SG.SUB-run-PST

Similarly, in the following examples with ‘kill’, it is not possible to use no since one cannot own a fly.

(100) a.  ti  aŋeŋu  nda  t-oi-a
he  fly  BEN2/3  3SG.SUB-kill-PST
‘He killed the fly for you.’
b.  * ti  aŋeŋu  no  t-oi-a
he  fly  BEN2/3  3SG.SUB-kill-PST

Second, when used in contexts which may or may not be possessive, the possessive reading seems to be obligatory. In the following examples, either the bird goes to you after he shoots it, or you have a bird and he shot it.

(101) a.  ti  kufi  no  tu-tfọjaŋ-a
he  bird  you.BEN  3SG.SUB-shoot-PST
‘He shot the bird to give to you. / He shot your bird.’
b.  ti  kufi  nda  tu-tfọjaŋ-a
he  bird  BEN2/3  3SG.SUB-shoot-PST
‘He shot the bird for you (because you can’t shoot it).’

6.3 Benefactives 3 – Ordinary object forms

In some cases, ordinary object forms can be used to express a benefactive argument. It is not clear whether there is a meaning difference between these and other benefactive forms. It often arises with a benefactive change-of-possession interpretation.
However, it also occurs in some cases where there is no change of possession interpretation. These cases alternate with mba/nda.

Similarly, if one prays to God, asking God to do something for someone else, the bare pronoun may appear, or the benefactive marker mba/nda may appear as well.

It is very unclear to me at this point what constrains the ability of an object pronoun to express a benefactive—sometimes it works, sometimes it does not, and other times it effects a
particular kind of interpretation. For example, an object pronoun can be used with ‘cut meat’ only if the meat is being divided amongst a group of people.

(105) \[ \text{ti \text{n}uqu amboro \text{t}-\text{efel-a}} \]
\[ \text{he meat me 3SG.SUB-cut-PST} \]
‘He cut the meat into pieces and a piece of it is for me.’

Txuss Martín (p.c.) informs me that Romance datives often alternate in a similar way, such that this kind of partitive reading is forced when the object is indefinite. This raises the possibility that a definiteness contrast of some sort is at issue in ordinary pronoun benefactives. I have to leave this for future research.

7 Comparatives

Equal comparison is expressed with the morpheme \text{no}ŋ. Note that the complement of \text{no}ŋ does not trigger agreement.

(106) \[ \text{ti \text{k}adu-re \text{ama-no}ŋ} \]
\[ \text{he big-COP I-as} \]
‘He is as big as me.’

The morpheme \text{no}ŋ can also be used with a verb meaning ‘resemble’.

(107) a. \[ \text{ti \text{l}eri-no}ŋ \text{ t-up-e} \]
\[ \text{he donkey-as 3SG.SUB-resemblePRS} \]
‘He resembles a donkey.’

b. \[ \text{ti \text{ama-no}ŋ \text{ t-up-e}} \]
\[ \text{he I-as 3SG.SUB-resemblePRS} \]
‘He resembles me.’

c. \[ \text{ismael harun-no}ŋ \text{ t-up-e} \]
\[ \text{Ismael harun-as 3SG-resemblePRS} \]
‘Ismael looks like Harun.’

However, this verb can also mark its second argument with the comitative \text{-mbo}.

(108) \[ \text{ismael harun-mbo t-up-e} \]
\[ \text{Ismael harun-COM 3SG-resemblePRS} \]
‘Ismael looks like Harun.’
Comparatives are expressed using the source marker *malak*.\(^{34}\)

(109)  
\begin{align*}
\text{ti am(a) anda-malak kadu} & \\
\text{he I 1SG-from big} & \\
\text{‘He is bigger than me.’} & 
\end{align*}

### 8 Instruments, Comitatives, and Conjunction

The marker *-mbo* can mark instruments, comitatives, and conjunction. On comitative, it is only marked on one argument.\(^{35}\)

(110) **Comitatives**

\begin{align*}
a. \quad & \text{ama ñuguru kaltam-mbo a-na} \\
& I \text{ food Kaltam-COM 1SG.SUB-made} \\
& \text{‘I made the food with Kaltam.’} \\
b. \quad & \text{ama ñuguru kaltam-mbo-gi a-na} \\
& I \text{ food Kaltam-COM-together 1SG.SUB-made} \\
& \text{‘I made the food together with Kaltam.’} 
\end{align*}

When used to mark conjunction, however, it appears on both coordinates.

(111) **Conjunction**

\begin{align*}
a. \quad & \text{ama-mbo may-mbo bato-go m-i:s-a} \\
& \text{I-COM you-COM cat-OBJ 1PL.SUB-bite-PST} \\
& \text{‘I and you bit the cat.’} \\
b. \quad & \text{ama-mbo daud-mbo bato-go m-i:s-a} \\
& \text{I-COM Daowd-COM cat-OBJ 1PL.SUB-bite-PST} \\
& \text{‘Daowd and I bit the cat.’} 
\end{align*}

The examples in (112) show *-mbo* being used to mark instruments. Interestingly, when instruments themselves are coordinated, *-mbo* seems able to do “double duty” (112b). That is, no extra marker is needed to express the coordination.

(112) **Instruments**

\begin{align*}
a. \quad & \text{ama ñuk̡o: abi-mbo a-ka-na} \\
& \text{I knife sand-COM 1SG.SUB-wash-PST} \\
& \text{‘I wash the knife with sand.’} 
\end{align*}
b. ama ḋọkọ: sa-mbo  abi-mbo a-ka-na
   I   knife   water-COM sand-COM 1SG-wash-PST
   ‘I wash the knife with water and sand.’

Similarly, when two locative-marked arguments are coordinated, there is no extra marker
for coordination—i.e., -mbo is not used.36

(113) **Coordination of locative arguments**

a. maṣ sa:  am(a) anda-m  l-ọi-na
   you   water I     1SG-LOC 2SG.SUB-pour-PST
   ‘You spilled water on me.’

b. ti sa:  [ maṣ ḋịja-m am(a) anda-m ]  t-ọi-na
   he water [ you 2SG-LOC I     1SG-LOC ] 3SG-pour-PST
   ‘He spilled water on me and you.’

This shows that it is possible to coordinate DPs without the marker -mbo, at least in this once case
where a locative marker is used instead.

9 **Summary and Outstanding Questions**

In this section, I briefly summarize the aspects of Masarak argument structure and agreement that
I have discussed in this paper, and then enumerate some areas of this topic for which questions
still remain. Masarak is a NOMINATIVE-ACCUSATIVE language, in which verbs agree with objects
when they are [+PARTICIPANT], and with subjects when objects are [−PARTICIPANT]. Object
agreement is accompanies by an inverse morpheme which is sensitive to the φ-features of the
subject. Indirect objects of synthetic causatives and ‘give’-type verbs may trigger object agreement
(when they are [+PARTICIPANT]), but benefactive indirect objects never trigger agreement. This
seems to be related to the high/low applicative distinction of Pylkkänen (2002). In ditransitives,
the object which does not trigger agreement has no effect on agreement morphology. Comitatives,
instruments, and (some) DP coordination is marked with mbo. Sources, spatial goals, and locatives,
are all marked with postpositional elements, as is direct comparison. The following is a list of some
of the functional elements in Masarak which I have discussed.
A small inventory of relevant functional elements

malak ‘from’
kanaŋ ‘to/toward’
-m ‘at/locative’
-mbo ‘with/and’
-to ‘for/benefactive’
mba ‘for/benefactive (1st person)’
nda ‘for/benefactive (2nd/3rd person)’
-n- ‘cause’
-nd- ‘cause’
-noŋ ‘as’

There remain some outstanding questions related to the topics discussed here:

**Conjunction** When can conjunction be null and when is -mbo required? How is conjunction expressed with PPs, VPs, clauses, etc.? How is disjunction of various categories expressed?

**Unergatives** What is the difference between incorporated and unincorporated unergatives, semantic and otherwise? Which verbs can alternate, and which must take one form or the other?

**Benefactives** What is the relation between what I have called the possessive benefactive construction and ordinary possessive constructions? What factors constrain the availability of unmarked (objective) benefactive arguments? What governs the distribution of the ‘floating’ benefactive mba/nda.

**Oblique Subjects** Do oblique subjects always alternate with non-oblique subjects, or are they sometimes obligatory? Which predicates license oblique subjects? What kind of subject behavior do they show?

**Causatives** Which causative alternations can be synthetic with -n-/nd-, which are unmarked or marked with a vowel change, and which must be analytic? What is the relationship between the two forms of analytic causative, and what kinds of causation can they express (adjectives, predicate nouns, etc.)?

**Case Marking** What governs the various forms of objective case? When is double marking of -ko allowed, and when is it not? What is the nature of the -ų/-wo marker which appears on
direct object proper nouns only in the presence of indirect object proper nouns?

Agreement What is the relation between object agreement markers and the agreement markers seen with some postpositons? Are these markers more appropriately analyzed as clitics? What is the relationship among the various -mb-/nd- forms (inverse marking, postpositional agreement, and benefactive marking)—are these different morphemes or different instantiations of the same morphemes?

Postpositional Agreement Are kanay ‘toward’, malak ‘from’, and -m ‘locative’ the only postpositions which show these “agreement” (or clitic) forms? What is the distribution of these phrases in the clause, and how should these be analyzed—postpositional agreement, a biclausal structure, or something else?

Morphology of Postpositional Forms Are postpositions like malak ‘from’ multimorphemic? What is the relation of malak to lak ‘from/via’ and mana(i) ‘from’?

Word Order For all the constructions discussed in this paper, it would be worth knowing what word orders are allowed, which are preferred, what constrains the others, and which are never allowed. This would undoubtedly provide insight into the structures underlying these constructions.

Wh-questions Similarly, for each of the constructions discussed, it would be worth knowing how wh-questions are formed with various foci. This too is a necessary next step toward understanding the structures underlying these constructions and the syntax of Masarak in general.
Notes

1. The following abbreviations are used here: ACC = accusative, BEN = benefactive, BEN1 = 1st person benefactive, BEN2/3 = 2nd/3rd person benefactive, CAUS = cause, COM = comitative, COP = copula, DEM = demonstrative, ERG = ergative, IMPFV = imperfective, INCH = inchoative, INV1 = singular inverse, INV2 = plural inverse, LOC = locative, FNEG = negative, NOM = nominative, OBJ = object, PFV = perfective, PL = plural, POSS = possessive, PRS = present, PST = past, SG = singular, SUB = subject.

2. Though see below on oblique subjects.

3. Here I am referring to incorporated unergatives in the sense of Hale and Keyser (1993).

4. See Leffel (2010b) for more detail on topic doubling.

5. Here I use the generic gloss OBJ ‘object’ to avoid committing to the exact function of this morphology. It is worth recalling that plural pronouns alternate between ending in [a] and [ao], though it is unknown whether there is any connection between the two phenomena.

6. As noted below, ditransitives with ‘give’ and two human internal arguments are most natural understood in reference to marriage.

7. Here, I abstract away from two things. First, the 2nd person singular subject agreement form, is not always Ø-, but is sometimes one of a number of other forms (e.g. g-, qj-, l-, etc.). Similarly, the 3rd person subject form is sometimes wi-. Second, in the object agreement forms, there is often a vowel following -mb-/nd-, either -a-, -i-, or something else. This seems to be determined by the stem. I don’t have anything to say about this alternation.

8. Since I am comparing subject and object agreement morphemes, I ignore 3rd person for now.

9. This understanding of “person” is from Nevins (2007), who cites Halle (1997).


11. In this section, I will by and large not be concerned with linear order. For present purposes it suffices to assume that DP arguments will move to their surface positions by spellout, whatever those positions might be.
12. The object that does not trigger agreement, as far as I can tell, has no effect on agreement morphology.

13. Here I focus on ‘give’, but we will see below so causative examples as well.

14. Although 3rd person plural, in some cases, may plausibly be analyzed as as pure number marking, and not person marking (since 1PL = mu-, 2PL = ku-, 3PL = u-), this is perhaps less plausible in other cases, where 3PL is marked with a w-. I leave this for future research.

15. This is an oversimplification. For example, when objects trigger verbal suffixal agreement, subjects can agree with an auxiliary. When the subject triggers suffixal agreement, there is no agreement on the auxiliary. See McGinnis (2008) and Krämer and Wunderlich (1999) for more on Yucatec Mayan.

16. It is a ‘high applicative’ in the sense of Pylkänen (2002).

17. Here I assume a standard definition of closeness along the following lines: \( \beta \) is closer to \( \alpha \) than \( \gamma \) iff (i) \( \alpha \) c-commands \( \beta \), (ii) \( \beta \) c-commands \( \gamma \), and (iii) \( \gamma \) does not c-command \( \beta \).

18. This proposal does not say anything about how the features go from these structures to the particular morphological realizations we observe. It only accounts for the preference of the IO over the DO and the inability of benefactives to trigger agreement.

19. See Wadley (2010a) for some discussion of analytic causatives. Some ‘unmarked’ causatives appear to involve a vowel change in each variant; I do not discuss these hear either.

20. Some verbs seem to show alternation between the two, as pointed out to me by Ed Chu.

21. Possibly, there is a morphological relationship between ‘learn’ and ‘know’. Consider the following examples, where I segment the verb to reflect this hypothesis:

(i)  
ama masarak a-us-e  
I     Masarak 1SG.SUB-know-PRS  
‘I know/speak Masarak.’

(ii)  
ama masarak a-us-iŋ-a  
I     Masarak 1SG.SUB-know-INCH-PST  
‘I learned Masarak. / I came to know Masarak.’

In itself there is no reason to suppose that we are seeing anything other than two different words, and that might be what is going on. One reason I am considering this possibility at present is that
Daowd went out of his way to emphasize that it means “you didn’t know the language before and now you do.” Of course, since this is precisely the meaning of learn, more forms are needed to know whether there is in fact an inchoative -iŋ- morpheme. I have seen various examples which suggest this is the case. For example, there appears to be an -iŋ which reflects telicity with cooking (i.e. the -iŋ variant means ‘cook all the way’). However, the issue requires further, more systematic research.

22. Chris Collins (p.c.) points out that the same -nd-/-n- alternation is found with the subject-relative agreement marker, suggesting that this might be a more general phonological alternation.

23. The segmentation here is preliminary. Note that the 1SG.SUB form tends to be Ø- when the stem begins with [a].

24. Glosses here are adapted to my own conclusions about agreement morphology.

25. I do not know at this point whether there is any significance to the length differences in attributive 
    *kadu* versus predicative *ka:du*. The transcriptions come from Wadley (2010a).

26. In some cases, *lak* can be used without ma-. It is not clear what factors govern the choice at this time. See Julie (2010) for discussion.

27. This, among other facts, might suggest that Masarak agreement is more appropriately analyzed as clitic doubling or the like. I abstract away from this here.

28. The following examples are not perfect minimal pairs with the preceding examples because they have no second subject pronoun. Instead, the agreement on -malak suggests that this is an instance of the same NPAC. Presumably this will be verifiable in the future.

29. However, some cases of *mala-ge* have shown up in copular predications, possibly analyzed as malak+je, so it remains to be seen exactly what the forms of malak are.

30. Note that the verb for ‘put’ is potentially a complex causative, as it contains -nd- following the agreement. See section 4.1 for discussion.

31. This suggests that it is a clitic, perhaps a realization of the benefactive applicative head which introduces at, as in some analyses of romance dative clitics (see e.g. Cuervo (2003)).

32. Strictly speaking, this sentence is ambiguous between all non-1st persons, as noted above. Here
it is to be understood on the reading where it refers to a female 3rd person.

33. Unfortunately, I do not have data on what form shows up with plural DPs.

34. Neil Myler (p.c.) informs me that Quechua shows a similar paradigm for comparison, using source marking.

35. The -gi suffix here does not strictly speaking mean ‘together’, but is rather related to the definite marker. See Martín (2010) for discussion.

36. The following word order is also possible:

   (i) maŋ am(a) anda-ma  l-ɔɾ-na
       you I 1SG.LOC water 2SG.SUB-pour-PST
       ‘You spilled water on me.’
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